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A SYMBOL—AND MORE

This month the Texas Medical Association will observe one of the most important milestones in its nearly one hundred years of existence. For the first time, the medical profession of this state will dedicate a building designed and constructed to house its central offices and library. Although the Association previously owned one building in which its headquarters was located, that structure was a residence converted to office use, had the drawback of inadequate space, and was not fireproof. The new building has been functionally planned and executed to permit the most effective use of equipment and personnel, and its attractive appearance is enhanced by the knowledge that the materials used for construction will protect the important records stored within it against fire and other hazard.

In mid-August the staff and equipment of the Association were moved to the Memorial Library building at 1801 Lamar Boulevard in Austin, and the telephones connected to the old number, 7-9447, were shifted to the new positions. Although landscaping is incomplete and some of the functions of the central office have not been geared entirely to the different surroundings, the new building is beginning to seem like "home."

Shortly after receipt of this JOURNAL, members of the Association from all over the state and distinguished guests from throughout the nation will converge on Austin for three days of ceremonies aimed toward dedicating the new building to many years of service for the citizens of Texas. On Thursday, September 18, immediately preceding the three-day observance, the Executive Board of the Woman's Auxiliary to the Texas Medical Association will convene in Austin. Friday, September 19, the celebration will begin with tours of the building for physicians and their families and will reach a high point with two special programs, one honoring past presidents of the Association and the other dedicating the building. United States Senator Lyndon B. Johnson and Dr. Louis H. Bauer, Hempstead, N. Y., President of the American Medical Association, will be the chief speakers at these programs. Saturday has been

set aside primarily for meetings of Association committees during the morning and for a meeting of the Executive Council that afternoon. Sunday an all-day open house for the public is planned, and a thirty minute radio broadcast carried as a public service over the Texas State Network at 7 p. m. will emphasize highlights of the three-day activities.

Additional details about the September 19-21 ceremonies are contained in a special section of this JOURNAL to be found in the center pages. This section also relates in picture and story some of the history of the Association which has pointed toward the advisability of erection of a headquarters building, suggests the myriad services currently available through the central office and library, and names some of the men and women who have spent much time, effort, and money in seeing that the dream of an adequate building became a reality.

The special section of the JOURNAL has been reprinted for distribution to visitors at the building and for mailing to organizations and individuals all over the world. Great interest has been evidenced by people in many areas and occupations, and it is hoped that even those who cannot tour the building in person will get a hint from this booklet of the objectives which the building helps to fulfill and of the service which the medical profession has provided and will provide to the people of Texas.

It is the belief of officials of the Association and the pledge of members of the central office and library staff that the new facilities will result in greater service to the physicians of the state and their wives, and through them to all the people of Texas. No change may be evident at once (the disruption of moving may even cause a temporary deterioration of service), but as the months and years go by and the newness of the building is forgotten in the day-to-day pleasure of its use, old services should flourish and new ones may be added as they become desirable.

The Texas Medical Association library and headquarters building is a sort of symbol. It points to the past, when pioneer doctors struggled to bring some comfort and hope to the sick and distressed when techniques and drugs were crude and untried. It points to the present, when the developments of medicine and surgery have made life longer and happier for almost everyone. It points to the future, when research in the laboratory, clinic, and library will bear still finer fruit, relieving mankind of some of the remaining diseases which are dreaded today and perhaps creating a greater understanding between those who heal and those who are healed.

The building is more than a symbol, however. It is a workshop with personnel and facilities upon which the physicians and general public can call and expect to receive help. As such, it promises to have a direct share in bringing to fruition the bright hopes which medicine holds for the future.

ELEMENTS IN THE "DOCTOR SHORTAGE"

A wise man once said: "It isn't what is true that counts so much as what people think is true."

This fact is abundantly understood in the constantly recurring question of doctor distribution in Texas.

Critics of medicine simply refer in sweeping terms to "doctor shortages," in spite of statistics placing this nation at the top of the heap in physician-population ratio. Even our sincere critics assess the situation in terms of "doctor distribution." They may concede against shortage, but still hold that our distribution pattern is not the best it could be.

Recognition of what people think is true becomes important in this field of debate, and the medical profession in Texas has acknowledged this fact in the recent establishment of a special Committee on Doctor Distribution. The committee is headed by Dr. Chester Callan of Ro-

tan, chairman of the Association's Committee on Rural Health. The special committee is composed of able, practical, and sincere men. It has an opportunity to do much good for many Texans.

In the work of this group, the real factors in the problem will doubtless be sorted, analyzed, and acted upon.

For example, few communities which protest their need for a doctor stop to realize the responsibility of the community itself to help get the job done. There is, first of all, the hard, practical, economic question: Will the community support a doctor? Not every town in Texas is big enough for a steam laundry—nor, perhaps, for a doctor.

Is there adequate housing and are educational facilities ample within the community? Time and again across the nation, these questions have required solution before a community could keep a young doctor even after getting him.

Will the community's citizens allow the "bypass practice" to spring up? Will they give the young doctor their head and chest colds but drive straight past him to the nearest large city when they feel the illness is of serious proportion? If they do, surely the doctor cannot stay in business.

These are things that concern the community. There are problems that concern the profession as well.

Can the medical profession in Texas do a real job in selling young doctors on practice in rural areas? It has been done elsewhere, and the medical preceptorship program recently launched by the Texas Academy of General Practice appears to be a strong step in the right direction.

On a more immediate basis, there is the problem of communication to all sources of doctor supply — not only the Texas medical schools and those of other states, but a reservoir of practicing physicians who, like many other citizens, want to move to Texas.

In fairness to all, the question of doctor distribution is not nearly as serious as medicine's critics would have us believe. At the same time, it exists because people believe it exists.

The medical profession has recognized this fact with the establishment of the special Committee on Doctor Distribution. Only good things can come from the work of these men.

RED FEATHER MONTH

October is the traditional Red Feather month for Community Chests of America and the United Defense Fund. Seventeen thousand local Red Feather services for health, recreation, and welfare throughout the country depend on the October campaign for financial support.

This once-a-year campaign by the country's Community Chests and the United Defense Fund insures the health and welfare services vital to each community. Among the services that receive support from united Red Feather campaigns are such groups as the Salvation Army, Society for the Prevention of Cruelty to Children, Good Shepherd Homes, family counseling bureaus, Aid to the Blind, humane societies, Girl Scouts, Camp Fire Girls, Y.W.C.A., Y.M.C.A., convalescent homes and sanitariums, tuberculosis associations, and agencies for national emergencies. Services financed through the United Defense Fund are administered by the United Service Organizations, United Community Defense Services, American Relief for Korea, American Social Hygiene Association, and National Recreation Association. Newest among the United Defense Fund federation is the United Seaman's Service, which joined in April, 1952, to establish service centers to provide food, comfortable quarters, and recreation for seamen while in port.

In many communities national health and welfare appeals such as those for the Red Cross, heart, cancer, tuberculosis, polio, and crippled

children join with united campaigns in certain areas of solicitation. No national goal is set since Red Feather campaigns are conducted for local needs and responsibilities.

Contributions are given freely and are converted into services bearing no label of charity but vital in providing health and welfare services and developing better citizenship in each community. Texas physicians and their families will be prepared next month either to join the army of citizens who will go into action to collect the funds or to give freely and generously for these projects so closely allied to the aims of the medical profession.

PRESIDENT'S HEALTH COMMISSION

The recent activities of the President's special Health Commission in Dallas offer much more food for thought than at first meets the eye.

A total of eight hearings were held over the nation. They were operated on a virtual flying squad basis judging from the Texas example. In Dallas, the advance work was done in two or three days about a month prior to the hearing. This consisted in lining up by telephone a number of speakers to discuss Texas health problems. The hearings themselves lasted one day.

Out of these hearings, as one newspaper wisely remarked, Texans were alerted as to certain shortcomings in their health picture. There can be no question but that any profession—medicine not excluded—continually discovers weaknesses in its structure and must continually strengthen those weak points. As the same newspaper commented, these things must be done at home and not by the federal hierarchy.

The interesting thing about the Commission's work, however, was the coincidental timing with elections. This point was further underscored by the fact that proponents of the hearings vigorously insisted that no results were to be announced until the end of the year, long after elections, and yet the press wires were full of hearing summaries almost by the time the meeting was over.

Doctors have been about the business of trying to keep people well for a mighty long time. It is hard not to look askance at the significance of a hearing such as that conducted in Dallas which purports tremendous accuracy as a result of a one-day stand.

CURRENT EDITORIAL COMMENT

MANPOWER CONSERVATION

Living as we are today on a global basis and competing as we must eventually with worldwide masses of labor, it is readily apparent that we must use our manpower effectively to maintain an adequate civilian economy at home and to advance our military strength to a point that it will deter aggressor nations.

Demands currently being made upon production make it necessary to draw additional workers from labor reserves such as women, older workers, handicapped persons, and adolescents. The physician must play a key role in the appraisal of the health status and work capacity of persons in these groups to make selective job placement possible.

Ironically, women constitute the chief reserve of manpower. Today many jobs are engineered to eliminate the need for sheer strength so that women can fill various types of jobs, and in some they even excel the performance of men. Some factors which should be considered in the employment of women follow:

1. They can perform most jobs satisfactorily.
2. They are absent three times as often as men and lose 50 per cent more time.

This department of the JOURNAL *presents editorial comments on current items pertaining to the science, art, and practice of medicine, contributed by members of the Texas Medical Association and scientists closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the Texas Medical Association to submit such discussions for this department. The discussions should not be more than 500 words in length.*

3. Machines and benches should be adjusted to fit the female worker to minimize fatigue.

4. They are no more susceptible to occupational disease or industral injuries than are men.

5. Pregnancy occurs among 5 per cent of the employed married women annually. In suitable jobs, pregnant women might work until six weeks prior to delivery but should not return to work earlier than six to eight weeks after delivery.

6. Lost time from dysmenorrhea and menopausal changes can be greatly reduced by appropriate medical handling.

7. Young mothers returning to their premarital jobs are usually good workers, but if the baby sitter is industrially employable, the net gain has been little or nothing.

In April, 1951, there were 3 million men and 6 million women over 65 years of age in the civilian noninstitutional population of the United States who were not working. Undoubtedly, there is some work capacity in this group which can be utilized through appropriate evaluation by the physician of the individual's psychological and physical capacity.

The key to effective use of the handicapped is first a good physical examination and then the application of good selective job placement. Full utilization of available community services and funds for vocational rehabilitation will help restore many "forgotten" disabled persons to productivity.

In World War II the employment in industry of adolescents aged 14 to 18 years rose to a peak of about 2 million. However, the use of persons under 18 years of age as an additional source of manpower is not to be encouraged. The greatest service that youth can render is to maintain good health and complete their education so that they can become the effective manpower reserves of tomorrow.

Industry is scattered in all parts of the country so it is safe to assume that practically all physicians serve industry at some time in the course of their practice. The objectives of any industrial health service are to aid in the proper placement of all workers and to aid in maintaining and even improving their health. Today the objective of industrial medicine is positive or total health; the industrial physician must deal with man from the standpoint of his total environment—and in such an effort practically every physician and health worker should participate.

An adequate industrial health service should include:

1. Preplacement examinations.

2. Periodic health examinations especially of those exposed to occupational disease hazards and of those who need special follow-up.

3. Treatment of all occupational injuries and diseases.

4. Reasonable first aid care and advice for nonindustrial injuries and illnesses occurring while on the job.

5. Adequate records and analysis of the health experience to point out future objectives.

6. Collaboration with management in the provision of healthful working environment.

7. Collaboration in an active safety program.

8. Health education for employees.

9. Coordination with community health activities.

To achieve the objective of total health, increased efforts must be made in the field of prevention. The very nature of industry, which provides the framework for earning a living, for prepayment of medical and hospital insurance, and for periodic health audits of enrolled or assembled groups of people, offers an opportunity for a new era in preventive medicine for all who come under its purview. The evolution may be slow, but the reward can be great.

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ORIGINAL ARTICLES

BALANCE AND VERTIGO

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THE subject of vertigo (Menière's syndrome or Menière's disease) at present occupies a position of prominence in otologic thought and writing. As a result the membranous labyrinth has been pin-pointed for clinical consideration, and thereby some of the confusion concerning its clinical and anatomic pathology is being cleared away. Nevertheless, as long as the membranous labyrinth is considered solely as an end-organ of two diverse functions—hearing and balance—thrown together haphazardly, our conceptions will remain confused. The membranous labyrinth must be considered as a remote but integral part of the central nervous system with which it forms a physiologic unit, and in its function as an end-organ of special sense it must be conceived as dealing with graduated phases of markedly similar and closely related stimuli.

ANATOMICO-PHYSIOLOGIC OBSERVATIONS

As an organ of special sense the internal ear is primarily an organ of balance and as such it is a part of the equilibratory apparatus, the extremely complex mechanism controlling the physiologic process of equilibration. Because no physiologic definition of this process has hitherto been voiced, I have devised my own. I believe that equilibration may be defined as a process of muscle tonus, with or without conscious perception, by which the body, its limbs, and its eyes maintain normal positions in space and in relation to each other; by which these positions are regained when disturbed; and by which purposeful motions are consummated. Thus the eyes and the muscles and joints with their visual and proprioceptive senses are also important components of this apparatus, all acting under the ultimate control of widely distributed but closely interconnected areas of the central nervous system.

Complete equilibrium then rests on the triad of intact peripheral auditory-vestibular organs, active visual organs, and normal joint-muscle sense organs with their central connections. At least two of these elements must remain intact for partial equilibration. If two are absent no practicable degree of equilibration is possible.

Integrity (health) of the auditory-vestibular mechanism is indicated by a sense of stability; unimpaired positional reflexes and reflexes to linear and rotational motion; and the ability to assume purposeful attitudes and to consummate purposeful motions. Disruption (disease) is indicated by abnormal sensations of position and motion and by disturbances of the body-righting and positional reflexes, expressed in terms of exaggeration, diminution, or absence.

Secondarily the ear has become adapted to the process of hearing. Hearing may be defined as the perception as sound of waves of alternate condensation and rarefaction in the surrounding medium.

The peripheral vestibulo-auditory apparatus, the endolymphatic vestibulo-canallar labyrinth and the cochlear duct, which I will call simply the endolymphatic labyrinth, is divided by the long, narrow, and acutely angled ductus utriculo-saccularis into an upper portion consisting of the utricle and the semicircular canals opening out of it and a lower portion consisting of the saccule and the closely connected cochlear duct. Thus the anatomic division is not into vestibule and canals having to do with equilibration on the one hand and cochlea having to do with sound on the other hand, but into utriculo-canallar and sacculo-cochlear portions.

On the basis of this and other observations to be pointed out in a later communication I feel justified in stating that the canals are purely, or nearly purely kinetic in function, the utricle is principally kinetic and to a less degree static in function, the saccule is principally static in function with the ability to detect condensation-rarefaction waves at or below the limits of average audibility, and the cochlea is almost purely auditory in function but with certain central vestibular connections. With these points in mind, the physician can grasp a clearer understanding of the functions of the endolymphatic labyrinth and see a raison d'être of its apparent haphazard grouping.

This endolymphatic labyrinth with its surrounding perilymph is magnificently protected from external damage by being almost totally bone-locked in the bony labyrinth. There are but three exits from this bony labyrinth, the internal auditory meatus where the exit is only potential via the sheaths of the eighth

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nerve to the subarachnoid space of the posterior fossa; the aqueductus cochleae, an apparently direct but restricted and partially blocked[10] communication with the subarachnoid space of the jugular fossa; and the aqueductus vestibuli which opens into the subdural space of the posterior fossa but which is subtotally filled and blocked with the ductus endolymphaticus and the saccus endolymphaticus which mushrooms out under the dura.

The endolymphatic labyrinth is under a constant bombardment of impulses from the pulsating arteries and arterioles lying in the endosteum of the bony labyrinth and basilar membrane. If the recent observations of Ruedi[15] concerning the origin and drainage of the perilymph and endolymph are correct, to the cochlear aqueduct may safely be ascribed the function of buffering the pressure of the arterial pulsations in the perilymph, and to the saccus endolymphaticus the same functions in relation to the endolymph. These structures cannot buffer more than the physiologic pressure alterations resulting from the normal arterial pulsations, and should excessive pressure from edema occur within the endolymphatic labyrinth, the delicate end-organ structures lying within it pay the price of bone-locked security,[8] and inevitable and more or less permanent damage will occur.

The specific end-organs within the membranous labyrinth which perceive sound are the hair cells of the organ of Corti. These are overhung and contacted by the gelatinous tectorial membrane. Those which perceive motion and position and which respond to centrifugal force and current displacements and distortions and to the arterial pressure variations within the labyrinth are the cristae of the ampullae of the semicircular canals overhung and contacted by the gelatinous cupulae, and the maculae of the utricle and saccule overhung and contacted by the otolith membranes. The system of overhanging actuating membranes is another indication of the close anatomicophysiologic relationship of the various parts of the endolymphatic labyrinth.

The modus operandi of the membranous labyrinth is easily understood. The bombardment of mechanical impulses from the arterial pulsations causes a shower of nerve impulses to issue from the end-organs. The arterial pulsations are alternating condensations and rarefactions. In other words the entire labyrinth must be capable of transforming such impulses to undulatory waves, whether they originate in sound waves or in arterial pulsations. As the nerve impulses from the end-organs reach the central nervous system they are integrated by a complex mechanism into tonic efferent impulses which result in a state of equilibrium by the following process.

Each labyrinth has as its function in equilibration both a pushing and a pulling action, the pushing action having twice the strength of the pulling action. Thus the right labyrinth pushes to the left twice as powerfully as it pulls to the right. The push-pull force affects the eyes, the body, the limbs, and the conscious realm. At the same time the left labyrinth pushes to the right twice as powerfully as it pulls to the left. These pushes and pulls simply cancel each other and a state of equilibrium results.

If the left labyrinth is disabled suddenly, the right labyrinth will have undisputed sway, its push component will prevail, and the eyes of the person will deviate slowly to the left as far as possible. Then, because of the eye muscle fatigue and as a result of the action of the central control mechanism, they will snap back to the right producing nystagmus to the right; the person will fall to the left or will stagger or deviate to the left; external objects will seem to rotate to the left; and he will past-point to the left as if to follow the rotating objects. The same results will appear if the left labyrinth remains normal while the right labyrinth is over-stimulated. Thus exactly the same phenomena may be observed clinically if one labyrinth is depressed or its opposite is stimulated. Clinical tests will make the distinction, and it is evident that this differentiation must be made before any successful treatment may be instituted.

There is one process that above all others accounts for stimulation or depression of either labyrinth and that is the process of abnormal vasospasm or vasodilation and edema.

In 1928 Portmann, Despons, and Maisonobe[11, 12, 13] showed both experimentally and clinically by drug administration and by surgery on the carotid plexus that irritation of the sympathetic nerves produced vasospasm and hypertonicity of the ipsilateral labyrinth and that section or paralysis of the sympathetics produced vasodilation and hypotonicity of that labyrinth. This work forms the basis of the diagnosis and treatment of most labyrinthine disturbances.

If there is a sudden vasospasm of short duration, there will be excitation of that portion of the labyrinth supplied by the spastic artery. If the spasm releases promptly, the labyrinth will remain irritated for a more or less prolonged but temporary period. If the spasm persists, the capillary loop forming the arteriovenous connection just beyond the area of spasm will dilate and depression of the affected portion of the labyrinth will follow. Soon actual edema will develop from transudation from the stagnant capillary contents, and the stage is set for labyrinthine hydrops with its widespread labyrinthine depression. If adequate circulation is restored promptly enough, the labyrinth will show only moderate evidence of destruction. If the circulation is not restored or if a

prolonged spasm occurs in the labyrinthine artery at or before its division into vestibular and cochlear arteries, widespread and permanent damage will occur. Probably because the cochlear organ is the younger and therefore the more susceptible to damage, edema resulting from spasm of the cochlear artery seems to have the graver results. This latter lesion probably accounts for the extensive and damaging edema resulting in the labyrinthine hydrops described by Hallpike and Cairns,[7] the pathologic signs and treatment of which have been clarified by Day[8] under the name of Menière's disease.

It is my feeling that no one particular location of the vasospasm and its resulting specific lesions should be so designated. If the name of Menière is to be honored for his pioneer work, all forms of functional and organic labyrinthine disorders with their symptoms should be grouped together under the name of Menière's syndrome and the term cochleo-vestibular hydrops should be used to designate this particular entity.

To understand what causes the pattern of the entire clinical entity we must understand something of the tracts to and within the central nervous system followed by the nerve fibers from the labyrinthine organs and those returning from the higher centers to effect responses.

The fibers from the cochlea follow courses entirely different from those of the vestibulo-canallar endolymphatic labyrinth. Suffice it to say that by collateral connections with the medial longitudinal bundle and by secondary connections with the inferior colliculus, contact is made with the eye muscle nuclei and thereby is established its connection with the equilibratory apparatus.

The fibers from the vestibulo-canallar portion of the labyrinth have a diverse central distribution. Those having to do with body-righting reflexes connect with the cerebellum on their way to the spinal motor nuclei and to the cortex via the internal capsule. Those having to do with eye muscle reactions travel via the several midbrain tracts and the cerebellum to the nuclei of these muscles and then to the cortex via the internal capsule. These fibers as they approach and pass through the internal capsule are in close association and are connected with the nuclei of the extrapyramidal system, the primitive motor center; the thalamus, the primitive sensory center; and the hypothalamus, the center of our emotions, the basis of our primitive defense mechanism, and the center of many of our vital processes. All these structures cluster about the walls and floor of the third ventricle.

CLINICAL PROBLEM

Since the endolymphatic labyrinth is an integral part of the central nervous system, otologists must determine whether any manifest lesion is peripheral or central. If it is peripheral, has it a central origin? If it is central, what is its location?

If a lesion occurs in the peripheral organ, all of the functions of that organ, because of its bone-locked nature, are apt to be disturbed in more or less similar kind and degree. If the lesion is early central and organic, only certain of the tracts will be disturbed and the others will remain normal. If the lesion blocks the ventricular drainage system, pressure will become widespread, other neurologic findings will appear, and the specific labyrinthine disturbances will be masked. If the lesion is central but functional, the findings are almost always those of a peripheral one.

At this point mention might be made of an observation which I have made and which seems to be corroborated by continued observation of patients with certain neurologic lesions. If the lesion be low (probably subtentorial), the responses to turning will be disturbed while those to cold caloric stimulation will remain unaltered; but if the lesion be high (from the upper part of the fourth ventricle onward), the responses to turning will be normal while those to cold caloric stimulation will show disturbance. The elaboration and explanation of this phenomenon will form the subject of a communication now in preparation.

CLINICAL EXAMINATION

A sine qua non of an accurate diagnosis is a good history. The patient should be allowed to tell his own story and encouraged to talk. It should be ascertained if the onset was sudden with remissions (peripheral) or if it is steadily progressive (central). Is the complaint true vertigo with a sense of true rotation or movement in a definite plane or is it pseudovertigo such as faintness or a sensation of darkness or a sinking or rocking sensation? If true vertigo, is there nausea or staggering or falling? Are there disturbances of hearing, and if so, are the deafness and tinnitus permanent or do they constitute an aura preceding or accompanying the attack? The physician must also bring out, if present, the history of symptoms suggesting a central lesion such as headache, diplopia, or other visual disturbances. Has the patient noticed a causal relationship of the illness with some other factor such as another known illness, the use of a certain drug, the time of day, foods or other possible allergens, fatigue, worry, or undue family, social or economic stresses?

A complete examination of the auditory apparatus including high and low limits, the pure tone curve by both air and bone conduction, speech reception

ability, and the presence or absence of diplacusis and recruitment is the first step of the actual examination of the auditory-vestibular apparatus.

I start the examination of the vestibulo-equilibratory apparatus by observing the patient's gait for steadiness, staggering, or deviation; his Rhomberg response with the face forward, to the right, and to the left; the pelvic girdle reaction to sudden tilt; the presence or absence of nystagmus with the head and eyes in various positions; and the presence or absence of past-pointing. I then determine his ability to detect motion by turning him once slowly to the right and then to the left after a short pause.

Next I perform the classical Bárány turning tests, which are an important part of the examination. The normal physiologic function of the equilibratory apparatus is to respond to motion and to position. The turning tests probe this function. Therefore, they and not the caloric tests are the physiologic tests, and failure to perform them is negligence. This is not to deprecate the caloric tests. Only by the caloric tests can each ear be tested separately and can it be told accurately whether each ear is hyperactive or hypoactive. This latter I determine by the Atkinson ratio,[2] the ratio of the latent period to the duration of the nystagmus measured in seconds and elicited by 1 cc. of ice water instilled into the external auditory canal. The normal ratio is 1:4. If decreased (for example 1:5 or 1:6), it indicates hyperactivity; if increased (for example, 1:3 or 1:2), it indicates hypoactivity.

TREATMENT

Most of the cases of vertigo coming to the attention of otologists will be manifest peripheral lesions, and it must be determined first whether they are unilateral or bilateral, irritative or depressive, and if there is a manifest cause for the lesion.

Occasionally the cause will be found promptly and a dramatic cure will be effected. An example follows:

CASE 1.—August 11, 1941, a 55 year old white woman complained of recurrent attacks of vertigo with increasing tinnitus (especially on the right) and deafness. The attacks were sudden, rotary, of daily occurrence, and with increased tinnitus during the attacks. A moderate perceptive deafness was present bilaterally with moderate hypotonicity of the left labyrinth. The histamine test and the intradermal test for wheat were positive. Withdrawal of wheat from the diet gave prompt and total relief of both vertigo and tinnitus. A few months later the patient reported a severe attack, and she denied the ingestion of wheat. Close questioning uncovered the eating of fried squirrel dredged in wheat flour the evening before.

Most patients, however, have simple vasomotor (usually vasospastic) labyrinthitis, and if seen early in the intermittent vasospastic stage, the outlook for this condition is good with the use of vasodilators. If the case has progressed further, the use of vasodilators may have to be supplemented with autonomic ganglion blocking agents such as tetra-ethyl-ammonium chloride intravenously or procaine-adrenalin infusions into the stellate ganglion.[8]

If the case is so far advanced as to constitute so-called Menière's disease, it may be necessary to destroy the damaged labyrinth by surgery[3] or by streptomycin therapy, which Berg[2] has shown to have selective action on the cristae and the utricular macula and which Hanson[7] has shown clinically to have further selective action on an already damaged labyrinth.

After the otologist has explained to the patient just how the vascular dysfunction has brought about his trouble and what it is hoped to accomplish in alleviating his difficulty, he frequently asks, "But, Doctor, what made my blood vessels do that? What is back of all my trouble?" If the patient does not ask the questions, the otologist will ask them of himself. For their own self respect, otologists are forced to seek an answer to these fair and proper questions. When seeking that answer, the otologist is led invariably from the end-organ along the vestibular and cochlear nerves to the great trunk lines of the medulla, pons, and cerebellum and the switch-board of the floor of the fourth ventricle, up to the third ventricle, and then he begins to realize that he is at headquarters. Lateral lies the internal capsule with its fibers leading to and from the cerebral cortex, crowded, surrounded, and molded by and connected with the thalamus, the center of primitive sensations and the basal ganglia, the source of primitive and basic motor responses. Just below lies the hypothalamus, the cistern of emotions and the source of many basic vital functions—all connected and interconnected and acting behind the sensitive and overburdened cortex with its fears and its dreads and its intellectual inhibitions. Here the otologist must pause and say to himself, "Here is an area that must be probed and investigated to determine its true place in the plan of equilibration—of balance and vertigo."

Here in the basis of the autonomic nervous system may be the answer to why treatment of the posterior group of sinuses by displacement irrigation (with its probable effect on the vidian nerve) or anesthesia of the sphenopalatine ganglion area sometimes relieves vertigo, and why vertigo is so often accompanied by the postauricular pains of Sluder's syndrome; why destruction of the plexus of Jacobson sometimes relieves tinnitus[9] and why instillation of anesthetic agents into the middle ear sometimes relieves both tinnitus and vertigo[4] as do simultaneous surgical destruction of the plexus of Jacobson and severance of the chorda tympani[14]; why vertigo is sometimes associated with

hypoglycemia; and, most important, why such cases as the following occur.

CASE 2.—A 24-year-old white man was referred by his physician on July 20, 1928, for determination of the cause of his "vertigo." This "vertigo" was of a bizarre nature; it was not rotary and I suspected it of not being true vertigo. It had come in attacks over the past several years. While walking, the patient was forced to sit down, or he would find himself turned about and walking in the opposite direction. On attempting to arise from bed he would be forced to lie back down until the spell had passed.

When the routine physical examination was started, the patient assured me that I would see the worst job of butchery ever done on a pair of tonsils. When I told him that the work had been well done, he became truculent. I made no further comment and proceeded with the examination. The preliminary slow rotation had hardly begun when he threw himself violently against the chair screaming, "Stop it, stop it! That's exactly like my spells—it's exactly like that horrible anesthetic when I was flying through space and tried to come back and they wouldn't let me." Encouraged to continue, he spilled forth his story that during induction of anesthesia for his tonsillectomy he had the usual sense of vertigo and flying forward through space and that he had struggled to get them to stop the anesthesia so that he "could turn around and come back" but that the anesthetic had been continued forcibly.

The explanation that his present trouble was merely a repetitive fulfillment of his unfulfilled wish to "turn around and come back" left the patient skeptical, but I assured him that this was the answer. There have been no further attacks, and the patient has been under occasional observance since then.

CASE 3.—A 25-year-old unmarried white woman first seen June 30, 1942, had normal hearing. I saw her in the hospital where she had been taken the previous afternoon after falling on the street from a severe attack of vertigo. When she was seen, there was no nystagmus; there was irregular past-pointing, predominantly to the right, and she deviated to the right on walking—all suggesting possible left labyrinthine hypertonicity. The turning tests also suggested this, but caloric tests revealed left labyrinthine depression of varying degrees on various occasions, although on one occasion it did show hypertonicity. During subsequent visits she complained of vertigo without past-pointing or nystagmus. On other occasions she showed past-pointing and staggering without vertigo. She shifted back and forth, in and out of my care, without a definite diagnosis and with all possible types of therapy. During an out-of-town visit and on the advice of a friend, she consulted a psychoanalyst about certain other difficulties. Here her entire case was unraveled, including her so-called vertigo. Her surname happened to be homonymous with that of a practitioner of the "oldest profession." When she recognized this as the cause of an embarrassment that was disabling in her business and social life, her other difficulties as well as her vertigo promptly vanished.

Here the vertigo was not of a recognized type. It would not fit into the frame of any known affection of the equilibratory apparatus, and this alone should have suggested the diagnosis. However, never before nor since have I seen a purely psychic disturbance affect nystagmus without demonstrable organic or functional changes in the equilibratory organs.

CASE 4.—A divorced 37-year-old white woman sought relief on April 5, 1952, for deafness, constant roaring tinnitus, and attacks of vertigo. Her findings were typical of Menière's disease as described by Day.[3] There was marked perceptive deafness of the left ear. Both labyrinths showed appreciably lowered responses to turning and caloric stimulation, the left being lower than the right. She had visited many other competent otologists who had established the diagnosis and had used all the usual medications. In seeking to find what drugs had given her most relief, I asked her what one thing had done her the most good, and her answer shot back, "My divorce." It developed that her married life, begun at age 26, had been unhappy (all the husband's fault!) and that her vertigo had begun shortly after her marriage. It grew progressively worse until her divorce seven years ago. After her divorce she had no attacks for one year, when they resumed. She said that she could not account for her marital difficulties as she normally got along well with men, but not with women, especially her mother, whom she apparently disliked heartily. Then followed the final and revealing bit of history: "Doctor, I was mistaken about the time of my first attack. I just now remembered that my first attack came when I was 17 years old. It came suddenly, knocking me to the pavement. I was waiting on a street corner for my mother and I remember now how I dreaded meeting her." The patient has partially agreed to skilled psychiatric care.

Here is a case of well-developed classical "Menière's disease" with definite organic changes based entirely on psychiatric and emotional conflicts. Numerous such cases are in my files, and others are being reported in the later literature.[5] Still, we otologists must not feel that all neurologic cases are psychiatric.

CASE 5.—A 30-year-old white woman was referred on August 27, 1930, because of deafness, progressive since the age of 21 and suddenly reaching totality in the left ear. She had had innumerable treatments, especially tube tinkering, without relief. Recently she had been dizzy, especially on arising from bed and on sudden movements, and headache and some visual blurring had entered the picture.

Examination revealed marked fixation conductive deafness (otosclerotic) in her right ear and total perceptive deafness of the left ear. There was a totally unresponsive vestibular labyrinth on the left and no responses from the right vertical canals. The right horizontal canals responded normally. Surgical removal of a large neoplasm confirmed the clinical diagnosis of left cerebello-pontine angle tumor.

SUMMARY AND CONCLUSION

If we otologists see only the endolymphatic labyrinth in consideration of the problem of balance and vertigo, we make ourselves victims of tubular vision. We must broaden our concept of the problem so as to consider the cochlea as a minor part of the end-organ of equilibration and the saccule as an auxiliary organ of hearing, and to consider the entire endolymphatic labyrinth as a remote but integral part of the central nervous system. We are to remain otologists. We are not to consider ourselves as finished neurologists and psychiatrists to the eternal annoyance of qualified specialists in these fields and to our own certain discomfiture. Nevertheless, if we are to fulfill our functions as otologists, we must know the impor-

tant relation these fields have to otology and to understand them sufficiently to follow our own problems as they cross the nebulous line that joins rather than separates the specialties. When our problems reach those realms that are still to most of us a bit awesome because we are not fully at home in them, let us not try to meet them with a fatalistic and defeatist attitude. When the patient asks for relief, let us not tell him that he should have chosen his parents more wisely or that Grandmother should have been shot before she handed down an unstable autonomic nervous system about which we can do nothing two generations too late. Much can be accomplished for the relief and even the cure of the dizzy patient by correct diagnosis and correct and active therapy.

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ABSTRACT OF DISCUSSION

DR. W. B. NORMAN, Longview: Dr. Sellers is to be especially commended for his philosophy of the membranous labyrinth. Instead of a paper filled with details of the complicated functional examination of the membranous labyrinth, he has covered the subject from the basic standpoint —that the membranous labyrinth is another part of the body that can be profoundly affected by vasomotor instability. Perhaps our modern way of life is to blame or perhaps we are only recognizing it more often, but it seems that parasympathetic-sympathetic imbalance is being found far more frequently than heretofore. Hilger is convinced that Bell's palsy is a result mainly of vasospasm. Proud is unearthing evidence that in some cases serous otitis is due to vasomotor trouble. The vast field of vascular headaches, vasomotor rhinitis, and even many cases of allergy will likely find their solution in this field of autonomic imbalance.

I wish to thank Dr. Sellers for his definition of equilibration and emphasize that the eyes, the proprioceptive sense, and the membranous labyrinth are the important triad in the maintenance of equilibrium. The fact that a person can do without one but not two of the triad was brought home to me in the early days of streptomycin therapy for tuberculosis. I found that patients whose membranous labyrinths were for all intents and purposes dead could get along fairly well until they attempted to get around in the dark. With visual and labyrinthine help gone, they could not maintain equilibrium.

Another point that holds my interest concerns the fact that with central lesions, the labyrinthine tests vary according to whether the lesion is supratentorial or infratentorial. It has been noticed also that the testing itself makes a person with a supratentorial lesion far sicker than the same tests in a person with an infratentorial lesion.

Concerning clinical aspects of the problem, in my own practice, the battle is either won or lost with the taking of the history—whether a true sense of rotation is present, whether tinnitus is high pitched or low, whether hearing is distorted by diplacusis. After this paper, I will endeavor to find out more about the whole patient than heretofore.

DR. D. A. CORGILL, McKinney: Dr. Sellers is one of a select group of neuro-otologists who are scientists and who provide ideas, hypotheses, and basic understanding of physiologic mechanisms which, if deranged, produce disease and which to us ordinary physicians are little understood.

We are forced to deal daily with the symptoms of derangements, and one of the common symptoms is vertigo. It is a result of malfunction of the autonomic nervous system. Other symptoms include chronic recurring headache or head and neck pain, postnasal discharge, sinusitis which may progress to bronchiectasis, gastrointestinal disturbances from globus hystericus to peptic ulcer and ulcerative colitis, cardiac disturbances from "heart consciousness" to coronary heart disease and essential hypertension, allergy, and a much wider field including the diseases which appear to be allergies and yet for which no allergen can be found. Our lives of today are increasingly productive of this sort of disease, for we are forced to carry excessive levels of anxiety brought about by our highly integrated social and economic life.

Concerning treatment, it is necessary to approach the problem in two phases. First is the use of drugs including the following: (1) vasodilators, such as nicotinic acid or histamine; (2) autonomic blocking agents, such as tetraethyl-ammonium chloride or methantheline bromide (Banthine); (3) in special cases vasoconstrictors, such as or ergotamine tartrate or dihydroergotamine (DHE 45); (4) sedatives, such as triple bromides or phenobarbital.

The second phase of treatment represents a garden variety of psychiatry. It is wise to advise the patient that the drugs will help him; this provides needed reassurance, since his symptoms aggravate his anxiety and, in turn, make his symptoms more severe. Leading the patient to appreciate the pressures in his life, and their effect upon him and perhaps to correlate the time of increased pressure with increased severity of his symptoms is manifestly a difficult task, and yet, when this occurs, the tide of the battle has turned toward the day when he may even dispense with the drugs.

NEW AIR FORCE EYE EXAMINATION FOR FLYING

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IN the United States last year more than 440,000 physical examinations for flying were given to civilian pilots by civilian examiners. This figure does not include the examinations made by the military services. Many of these latter examinees were referred to ophthalmologists for diagnoses and opinions. For this reason it is believed that the new eye examination prescribed by the Air Force may be of general interest.

The new examination is described in Air Force Manual 160-1, dated September, 1951. Both the method of performing the examination and the standards to be applied in interpreting it have been changed. The methods and the changes will be discussed.

Each of the procedures has been selected after careful consideration of the known visual factors involved in the type of flying done by military pilots. Time does not permit a discussion of these visual tasks, but a more complete discussion is being prepared for presentation later.

The Air Force Manual 160-1 mentioned previously is a loose leaf publication. This arrangement permits changes to be made when desirable, by substituting new sheets. The manual is divided into separate sections to facilitate reference. One section describes the technique of the various eye examinations; standards applied in interpretation of the eye findings are described in another.

VISUAL FUNCTIONS IMPORTANT IN FLYING

Visual functions important in flying and tests to be used in measuring them are as follows:

1. The ability to discriminate very small distant objects.
   a. Visual acuity test (distance).
   b. Stereoscopic depth perception test (confirmatory).
2. The ability to appreciate relationships between self, aircraft, other objects, and the earth.
   a. Depth perception test. (This test only determines one factor in depth perception and will not give a reliable estimate of an individual's ability to perceive depth when he is permitted to use all depth perception clues. Its chief value is its corroboration of visual acuity and its evidence that simultaneous binocular vision is present.)
3. The ability to clearly distinguish small near objects.
   a. Near visual acuity test.
   b. Accommodation test.
4. The ability to distinguish colors.
   a. The pseudo-isochromatic plate test (Abridged American Optical).
   b. The School of Aviation Medicine color threshold test (under certain conditions).
5. The ability to distinguish objects in the peripheral field of vision.
   a. Confrontation test of visual fields or examination on perimeter and tangent screen.
6. The ability to see under reduced illumination.
   a. Night vision training session.
7. The ability to do the above functions with both eyes simultaneously.
   a. Depth perception test.
   b. Heterophoria tests (to a certain extent).
8. The ability to carry out the above functions with the eyes rotated in the various physiologic directions of gaze.
   a. Cover test.
   b. Muscle balance tests.
   c. Prism divergence test.
   d. Red lens tests.
   e. Near point of convergence test.
9. In addition it must be determined that the eye is physiologically sound so that it will continue to function satisfactorily.
   a. History of eye diseases, injuries, refractive errors, or systemic diseases which involve the eye.
   b. General examination of the external eye.
   c. Neurologic examination of the eye to include pupillary reactions.
   d. Motility examination.
   e. Determination of intraocular tension.
   f. Refraction.
   g. Ophthalmoscopic examination.

DESIGNING THE EXAMINATION

In setting up the exact examination equipment and procedure for the Air Force tests the following items were considered:

1. The examination should be as reliable as possible.

2. It should be an examination that can be taught to nonophthalmologists (flight surgeons).

3. It should require as small an amount of equipment and space as is consistent with the reliability desired.

4. It should require as small an amount of time as is consistent with the reliability desired.

5. Portions of it should be capable of administration by a well-trained technician without decreasing reliability of results.

In attempting to meet these criteria the entire Air Force examination for flying was reviewed. Every item in the examination was carefully scrutinized and only those believed to have validity for the flying task were retained. Such items as measurement of the interpupillary distance and routine testing of night

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vision (as distinguished from training of night vision) were dropped, therefore.

Then in attempting to make the examination faster and to administer it in less space, and also to make the results more uniform, the Armed Forces Vision Tester was adopted. In addition, this made the examination equipment portable without sacrificing standard conditions or the uniformity of results.

The Armed Forces Vision Tester is a modification of the Bausch and Lomb Orthorater. This latter instrument has been used in industry for many years and is familiar to most ophthalmologists. It has been modified for the Armed Services by changing the slides in it to alter the tests administered and by adding prisms to prevent malingering. These items were developed through the cooperation of a group of scientists working under the sponsorship of the Armed Forces-National Research Council Vision Committee. Much of the research was done by Dr. Louise Sloan Rowland under Navy contract. Dr. Benjamin Wolpaw, Dr. Henry Imus, and Dr. Richard G. Scobee were among other contributors to this development.

Examinations which can be completed on the Armed Forces Vision Tester are:

1. Visual acuity at 20 feet and 13 inches.
2. Vertical phoria at 20 feet and 13 inches.
3. Lateral phoria at 20 feet and 13 inches.
4. Depth perception (using binocular parallax as clue) at 20 feet.
5. Prism divergence at 20 feet and 13 inches. (Not currently in use, but will be as soon as standards have been validated.)

To complete the examination for flying, the following tests in addition to those given with the Armed Forces Vision Tester must be performed:

1. Color vision test.
2. Accommodation test.
3. Near point of convergence test.
4. Rotations of the eyes, including cover test.
5. Red lens test.
6. Visual field examination.
7. Refraction.
8. Ophthalmoscopic examination.
9. Examination of the external eye.
10. Determinations of night vision.

Of these latter items only two require a large room —refraction and determination of night vision.

Because of the unsatisfactory nature of the night vision testing program during World War II, it was decided to discontinue the testing of night vision as a routine procedure and to use the night vision training program as a substitute. A single test does not permit classification of the night vision of a person as poor, average, or superior; essentially it determines only that he is not night blind. A good night vision training program will determine the same thing, and those who are observed to be apparently night blind during night vision training can be sent to the flight surgeon for further testing. The Aero Medical Laboratory radium plaque night vision tester is used to test the night vision of these questionable cases.

The elimination of night vision testing, then, leaves only one examination—refraction—that requires the use of a 20 foot eye lane. This results in the saving of a great deal of space when facilities for a large number of examinations are required.

CONDUCTING THE TESTS

It has been demonstrated repeatedly that a well-trained technician can obtain reliable results with the Armed Forces Vision Tester. This reduces the total requirement for ophthalmologists and flight surgeons to administer the test.

An additional group of examinations which can be completed by well-trained technicians are:

1. Color vision test—pseudo-isochromatic plate test given under artificial light of daylight color temperature, or as an adjunct the School of Aviation Medicine Color Threshold Test (a quantitative test).
2. Accommodation, measured on the Prince rule.
3. Near point of convergence.

The flight surgeon or ophthalmologist himself should administer the following tests:

1. Rotations of the eyes, including cover test.
2. The red lens test.
3. Refraction.
4. Visual field examination (confrontation test).
5. Ophthalmoscopic examination.
6. External eye examination.

In addition, he should interpret the examination results completed by his technician assistants.

The examination technique outlined above using the Armed Forces Vision Tester does not mean that it alone is acceptable. An examination made in a properly illuminated 20 foot eye lane using standardized visual acuity charts, depth perception apparatus, and muscle balance test equipment is entirely acceptable. However, in the interest of economy of space and effort, reproducibility of results, and standardization of conditions, the new examination technique should be used as much as possible in the future.

DISQUALIFYING CONDITIONS

Qualifications for flying have been divided into three classes. These classes are not the same as those previously in effect. Class I now includes the standards for flying training; these are the highest standards required. Class II standards apply to those persons already trained, in whom experience compen-

sates for a slightly lower visual efficiency. Class III standards apply to persons who fly but who are not in primary control of the aircraft. When it is considered that the experience of the airman can compensate adequately for the decreased visual efficiency under all conditions, this decreased visual efficiency has been considered acceptable.

In all cases requirements for commission and for flying are listed. The standards for flying are either higher than those for commission or are the same. All requirements are listed under each heading with items disqualifying for commission and in addition those disqualifying for flying in the various classes. Thus, one can be qualified for commission without meeting the requirements for flying, but not vice versa.

The visual requirements for flying include those for commission and are reproduced below.

Organic Factors

Organic factors which must be considered are outlined in the manual as follows:

95. Eyes—Causes for Rejection
    a. For Commission:
        (1) Lids:
            (a) Trichiasis.
            (b) Destruction of the lids sufficient to impair protection of the eye from exposure.
            (c) Disfiguring cicatrices and adhesions of the lids to each other or to the eyeball.
            (d) Blepharitis, chronic, unless it is the opinion of the examiner that it is sufficiently mild in degree to interfere in no way with performance of duty.
            (e) Ptosis interfering with vision.
            (f) Inversion or eversion of the eyelids.
            (g) Lagophthalmos.
            (h) Growth or tumor of the eyelid other than asymptomatic, nonprogressive, small benign lesions.
            (i) Dacrocystitis, acute or chronic.
            (j) Epiphora.
        (2) Conjunctiva:
            (a) Conjunctivitis, acute, until recovered.
            (b) Conjunctivitis, chronic, including vernal catarrh.
            (c) Trachoma, unless healed without cicatrices.
            (d) Xerophthalmia.
            (e) Pterygium which encroaches on the cornea more than one millimeter or is progressive, as evidenced by marked vascularity or a thick, elevated head.
        (3) Cornea:
            (a) Keratitis, acute or chronic.
            (b) Corneal ulcer or history of recurrent ulcers.
        (4) Uveal Tract, Retina, and Optic Nerve:
            (a) Inflammation of the uveal tract (iris, ciliary body, or choroid), acute, chronic, or recurrent.
            (b) Retinitis.
            (c) Uveitis.
            (d) Neuroretinitis.
            (e) Chorioretinitis, unless healed, considered unlikely to recur and not interfering significantly with visual function.
            (f) Optic neuritis.
            (g) Papilledema.
            (h) Optic atrophy.
            (i) Pigmentary degeneration of the retina.
            (j) Coloboma of the choroid or iris.
        (5) Lens:
            (a) Opacities of the lens which are considered to be progressive or which interfere in any way with vision.
            (b) Dislocation of a lens.
        (6) Diseases of the Eye:
            (a) Glaucoma, primary or secondary.
            (b) Tumor of the eye.
            (c) Tumor of the orbit.
            (d) Exophthalmos.
            (e) Night blindness.
            (f) Asthenopia.
        (7) Ocular Motility:
            (a) Nystagmus.
            (b) Heterotropia.
            (c) Diplopia.
        (8) Other Organic Diseases of the Eye or Adnexa: Any organic disease of the eye or adnexa not above specified which threatens continuity of vision or impairment of visual function.
    b. For Flying—Classes I and IA:
        (1) History of chorioretinitis.
        (2) Any organic disease of the eye or adnexa not above specified which threatens continuity of vision or impairment of visual function and, in the opinion of the examiner, will in any way interfere with efficient performance of flying duty or the individual's well-being.
    c. For Flying—Classes II and III:
        (1) Any organic disease of the eye or adnexa not above specified which threatens continuity of vision or impairment of visual function and, in the opinion of the examiner, will in any way interfere with efficient performance of flying duty or the individual's well-being.
        (2) The disqualifying conditions listed under "Commission" and "Flying, Class I," when found in rated and trained personnel, will be individually evaluated with regard to severity, prognosis, and importance in relationship to continued flying.

Visual Defects and Other Factors

In other sections of the manual, disqualifying defects in vision, errors in refraction, and other related conditions are described:

116. Distance Vision—Causes for Rejection
    a. For Commission:
        (1) Uncorrected: Vision less than 20/200 bilaterally.
        (2) Corrected: Vision less than 20/30 in one eye and 20/20 in the other.
    b. For Flying—Class I:
        (1) Uncorrected: Vision less than 20/20 bilaterally.
    c. For Flying—Class IA:
        (1) Uncorrected: Vision less than 20/50 bilaterally.

(2) Corrected: Vision less than 20/20 bilaterally.

d. For Flying—Class II:
(1) Uncorrected: Vision less than 20/50 bilaterally.
(2) Corrected: Vision less than 20/20 bilaterally.

e. For Flying—Class III:
(1) Uncorrected: Vision less than 20/200 bilaterally.
(2) Corrected: Vision less than 20/20 in one eye and 20/30 in the other.

117. Refraction—Causes for Rejection
a. For Commission:
(1) Total hyperopia greater than 5 diopters.
(2) Total myopia greater than 3 diopters.
b. For Flying—Class I:
(1) Total hyperopia greater than 1.75 diopters.
(2) Total myopia greater than 0.25 diopters.
(3) Astigmatism greater than 0.75 diopters.
c. For Flying—Classes IA, II, and III:
No refractive standards.

118. Near Vision—Causes for Rejection
a. For Commission:
(1) Uncorrected: No limits.
(2) Corrected: Vision less than 20/20 in one eye and 20/40 in the other.
b. For Flying—Classes I and IA:
Uncorrected: Vision less than 20/20 bilaterally.
c. For Flying—Class II:
(1) Uncorrected: Vision less than 20/50 bilaterally.
(2) Corrected: Vision less than 20/20 bilaterally.
d. For Flying—Class III:
(1) Uncorrected: No limits.
(2) Corrected: Vision less than 20/30 in one eye and 20/20 in the other.

119. Heterophoria and Ocular Motility—Causes for Rejection
a. For commission:
(1) Esophoria: Greater than 15 prism diopters.
(2) Exophoria: Greater than 8 prism diopters.
(3) Hyperphoria: Greater than 2 prism diopters.
(4) Heterotropia.
b. For Flying—Classes I and IA:
(1) Esophoria: Greater than 10 prism diopters.
(2) Exophoria: Greater than 5 prism diopters.
(3) Hyperphoria: Greater than 1 prism diopter.
(4) Point of convergence (Pc) greater than 70 millimeters.
c. For Flying—Class II:
(1) Esophoria: Greater than 10 prism diopters.
(2) Exophoria: Greater than 5 prism diopters.
(3) Hyperphoria: Greater than 1.5 diopters.
(4) Point of convergence (Pc) greater than 70 millimeters.
d. For Flying—Class III:
No standards.

120. Accommodation—Causes for Rejection
a. For Commission:
No standards.
b. For Flying—Classes I and II:
Accommodative power less than the minimum for age as shown in Table VI.

TABLE VI.—*Accommodative Power Minimum for Age.*

Age	Diopters	Age	Diopters	Age	Diopters	Age	Diopters
17	8.8	24	7.2	31	5.4	38	3.4
18	8.6	25	6.9	32	5.1	39	3.1
19	8.4	26	6.7	33	4.9	40	2.8
20	8.1	27	6.5	34	4.6	41	2.4
21	7.9	28	6.2	35	4.3	42	2.0
22	7.7	29	6.0	36	4.0	43	1.5
23	7.5	30	5.7	37	3.7	44	1.0
						45	.6

c. For Flying—Class IA:
Accommodative power less than the normal mean value for age, as shown in Table VII.

TABLE VII.—*Accommodative Power Normal Mean Value of Age.*

Age	Diopters	Age	Diopters	Age	Diopters	Age	Diopters
17	11.8	24	10.2	31	8.4	38	6.4
18	11.6	25	9.9	32	8.1	39	6.1
19	11.4	26	9.7	33	7.9	40	5.8
20	11.1	27	9.5	34	7.6	41	5.4
21	10.9	28	9.2	35	7.3	42	5.0
22	10.7	29	9.0	36	7.0	43	4.5
23	10.5	30	8.7	37	6.7	44	4.0
						45	3.6

d. For Flying—Class III:
No standards.

121. Color Vision—Causes for Rejection
a. For Commission:
Impaired color perception is not disqualifying for commission. If job assignment requires color perception, appropriate color vision tests will be given.
b. For Flying—Classes I and IA:
Four or more errors in reading the 17 test plates of the AOC abridged pseudo-isochromatic plates.
c. For Flying—Classes II and III:
Four or more errors in reading the 17 test plate of the AOC abridged pseudo-isochromatic plates, unless the individual makes a score of 50 or better on the SAM CTT (Grade 1).

122. Depth Perception—Causes for Rejection
a. For Commission:
No standards.
b. For Flying—Classes I, IA, and II:
(1) Failing score (Verhoeff stereopter).
(2) Average error greater than 30 millimeters (Howard-Dolman). Individuals who make no errors in the depth perception test (as given on the machine vision tester) will be qualified without further testing. Qualification of examinees who fail the machine test will be determined on the Verhoeff stereopter.
c. For Flying—Class III:
No standards.

123. Field of Vision—Causes for Rejection
a. For Commission:
Defects which interfere significantly with binocular vision function.
b. For Flying—Classes I and IA:
(1) Contraction of the field for form of 15° or more in any meridian, unless the contraction is the result of an anatomic conformation of the examinee's face.
(2) Any demonstrable scotoma other than physiologic.
c. For Flying—Classes II and III:
(1) Contraction of the field for form of 15° or more in any meridian, unless the contraction is the result of an anatomic conformation of the examinee's face.

(2) Scotoma due to an active pathologic process.
(3) Scotoma, the result of a healed lesion, unless after full investigation it is the opinion of the examiner that it will interfere in no way with the flying efficiency and well-being of the examinee.

124. Night Vision—Causes for Rejection
a. For Commission:
Night blindness.
b. For Flying—Classes I, IA and II (Class III for rated aircrewmen only):
Unsatisfactory visual efficiency as determined by tests described in paragraph 57.*

*"57 *Night Vision*
a. General:
A careful history for night vision difficulty will be taken on all original examinations for flying. Night-vision testing will not be done unless there is reason to suspect a night-vision deficiency because of familial or personal history, fundus changes, behavior in dim light, etc. The standard night vision tester is the Aero-Medical Laboratory radium plaque night-vision tester.
b. Testing Technique:
(1) The tester will only be opened in the dark. If exposed to light it may not be used for 24 hours.
(2) A good dark room must be used. No light leaks should be visible after 30 minutes adaptation.
(3) The test is a Landolt ring on a radium plaque presented to the examinee at various distances.
(4) Unless great care is taken in performing the test, the results may not reflect the examinee's true night-vision efficiency. The operator will explain to the subject the necessity for looking slightly above, below, to the left, or right of the target until he finds the direction of fixation at which he can best see it.
(5) The Landolt ring is presented first at 5 feet in any of its four settings in random order. The subject must get four out of four or eight out of ten correct. If he does well at 5 feet, the examiner will move to 6 feet and on out until he fails to get eight out of ten correct. Persons who receive an unsatisfactory score will be carefully retested, and the best score obtained being taken as the test score. Scoring will be entered on the SF 88 as Superior (Sup), Satisfactory (Sat), and Unsatisfactory (Unsat).
(6) Score Classification:

10 or more feet	*Superior.*
5 to 9 feet	*Satisfactory.*
Less than 5 feet	*Unsatisfactory."*

125. Red Lens Test—Causes for Rejection
a. For Commission:
No standards.
b. For Flying—Classes I, IA, and II:
Any diplopia or suppression in the red lens test which develops within 20 inches of the center of the screen in any of the six cardinal directions.
c. For Flying—Class III:
No standards.

SUMMARY

The new Air Force eye examination for flying is outlined briefly. The eye functions to be tested are listed and the technique of making the examination enumerated. The use of the new Armed Forces vision tester is outlined. A summary of the causes for rejection for flying in the various Air Force classes is given.

This presentation may be of general interest because of the large number of consultations concerning ophthalmologic problems which are completed annually by civilian ophthalmologists..

School of Aviation Medicine.

ABSTRACT OF DISCUSSION

DR. JOHN L. MATTHEWS, San Antonio: Dr. Byrnes' explanation of the Air Forces' new visual standards is timely. His description of the new examination is of particular interest to those many concerned with military aviation during the war and with civilian flying now.

More than any other, Dr. Byrnes has emphasized the need for holding to the high standards on uncorrected distance visual acuity. Whereas certain laxity can be tolerated in the visual requirements for pilots of slow moving civilian craft, jet and rocket propulsion have greatly increased the demand for superior distance acuity. This is nicely pointed up in one of Dr. Byrnes' own examples of two aircraft, the size of F-80's, each flying at 1,800 miles per hour and closing on a head-on collision course. Assuming that the pilots have vision of even 20/15, only four seconds will elapse between the time of bare discrimination of plane details and collision. With all the equipment pilots must wear on their heads, the addition of spectacles is impracticable. Any lessening of the acuity requirements is potentially dangerous.

DR. HAROLD BEASLEY, Fort Worth: I think the biggest improvement in the new Air Force eye examination is the adoption of the Armed Forces Vision Tester. Because of the reliability of the instrument, even in nonprofessional hands, technicians can operate it with a high degree of accuracy and free the ophthalmologist from tasks which become distasteful when they are allowed to be routine. Certainly the instrument eliminates a large part of the many pieces of equipment which were necessary for examination according to the old regulations.

It is my impression that ophthalmologists in general are not too familiar with the Bausch and Lomb Orthorater. It is being used more and more in industry, and now that the Armed Forces are using a modification, I think it might benefit all ophthalmologists to learn more about the instrument to make proper interpretations of the findings rendered. I would be interested to know if the Civil Aeronautics Administration has considered the use of this instrument in their examination for civilian pilots.

Although the qualifications for flying have been divided into three new classes, there are not any major additions or deletions in this revision. The standards are no less rigid, nor are they any more restrictive. I have used the Air Force Manual 160-1 on several occasions recently and found it concise, well prepared, and especially well indexed.

Dr. Byrnes has given a great deal of effort and time to improving this examination for flying. Projects of this type, in addition to the research involved, must also be associated with a great deal of "red tape" and a compromising of opinion. This frequently makes a very difficult task.

The essayist and the Armed Forces-National Research Council Vision Committee are to be commended for this revision and the preparation of the manual.

DR. BYRNES, closing: I am grateful to Dr. Mathews for emphasizing the need for excellent visual acuity of pilots in modern fast aircraft. To answer Dr. Beasley's question about the possible use of a machine in testing the vision of civilian pilots by the Civil Aeronautics Administration, I know that the C.A.A. is aware of the Air Force's use of this equipment but I am unaware of any projected use of it as yet. Perhaps the C.A.A. desires to see what sort of experience the Air Force has with this equipment.

BILATERAL ABDUCTOR PARALYSIS OF THE LARYNX

Surgical Treatment

BERT DeBORD, M.D., Temple, Texas

WHEN both recurrent laryngeal nerves are injured, as occasionally occurs during a thyroidectomy, both vocal cords assume a position at or near the midline. On examination, the vocal cords remain stationary during respiration, but the slight tension brought about by the cricothyroid muscles, by way of the superior laryngeal nerves, is sufficient to approximate the cords on phonation. The patient may have adequate respiration through the narrowed glottic chink when at rest, but he has dyspnea on exertion. Until 1939, no satisfactory method of correcting the laryngeal stenosis was available, and the majority of patients with bilateral abductor paralysis were given the choice of a permanent tracheotomy or permanent disability. Procedures to correct the severed or injured nerves have proved unsuccessful.

In 1916, Baker[1] reported a case of bilateral abductor paralysis in which one vocal cord and the arytenoid cartilage were removed by a laryngofissure, and an adequate airway was obtained. Hoover,[5] in 1932, suggested a submucous resection of the vocal cord; however, other laryngologists found that the removal of a vocal cord, even when performed by a submucous resection, was too frequently complicated by postoperative infection with subsequent scarring and stenosis, and this procedure was abandoned.

In 1939, King[7] advocated an extralaryngeal approach to the problem. Through an incision along the anterior border of the sternomastoid muscle, the arytenoid cartilage was exposed and mobilized, care being taken to avoid incising the mucous membrane of the larynx. The anterior belly of the omohyoid muscle was then anchored to the arytenoid cartilage under sufficient tension to maintain a slight outward displacement of the arytenoid.

In 1941, Kelly[6] advocated the extralaryngeal removal of the arytenoid cartilage through a window created in the thyroid lamina, and contended that the removal of the arytenoid would provide sufficient glottic space for respiration and would preserve the voice. Clerf,[3] Woodman,[9] Barrett,[2] and others have suggested various modifications of the King[7] and Kelly[6] operations.

In August of 1950, I[4] was confronted by a patient who had a bilateral abductor paralysis of the larynx, complicated by multiple rib fractures, and who obviously would require surgical correction of the laryngeal disorder. Noting the rapid healing and epithelialization following a laryngofissure for the removal of cordal cancer, when antibiotic agents were used, I believed that an arytenoidectomy could be safely and more easily performed through the midline thyrotomy incision. It also seemed that an intralaryngeal arytenoidectomy, performed through the laryngofissure incision, would offer other advantages. By retracting the thyroid alae, excellent exposure of the arytenoid area would be afforded, dissection and disarticulation could be accomplished more easily, hemorrhage could be more adequately controlled, and, finally, the mucosal incision could be carefully approximated and sutured.

On September 25, 1950, with intravenous Pentothal Sodium anesthesia, an intralaryngeal arytenoidectomy was performed by the technique to be described, and an excellent result was obtained. The patient has had no further dyspnea since decannulation on October 24, 1950, and her voice has remained good. Since then, 2 other patients with bilateral abductor paralysis have been operated on in a like manner, and they, too, have enjoyed relief from dyspnea and have maintained good speaking voices.

TECHNIQUE FOR INTRALARYNGEAL ARYTENOIDECTOMY

The King[7] and Kelly[6] operations, with their various modifications, and Thornell's[8] procedure have all been successful in alleviating the distress caused by bilateral abductor paralysis of the vocal cords. However, those who have hesitated to perform an arytenoidectomy by the Kelly[6] or Thornell[8] method may feel justified in utilizing the laryngofissure technique, steps for which follow.

1. A midline incision is made over the thyroid cartilage. The overlying fascia and muscles are separated by sharp and blunt dissection.
2. The thyroid cartilage is split in the midline.
3. The thyroid alae are retracted, and .5 cc. of 1 per cent Novocain with Adrenalin is injected into the mucosa over the arytenoid cartilage.
4. An incision, .5 cm. in length, is made in the mucosa, directly over the arytenoid cartilage.
5. The arytenoid cartilage is dissected.
6. The crico-arytenoid joint is disarticulated and the arytenoid cartilage is removed.
7. Hemostasis is accomplished with pressure, electrocoagulation, or ligation.

From the Department of Otolaryngology of the Scott and White Clinic.

Read before the Section on Eye, Ear, Nose, and Throat, Texas Medical Association, Annual Session, Dallas, May 7, 1952.

8. The mucosa is closed with a 0000 absorbable surgical suture. The thyroid alae are approximated, and the overlying muscles and skin are sutured.

SUMMARY

Three patients with bilateral abductor nerve paralysis have been satisfactorily rehabilitated by a unilateral intralaryngeal arytenoidectomy, performed through a midline laryngofissure incision.

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ABSTRACT OF DISCUSSION

DR. J. H. BARRETT, Houston: Dr. DeBord's operation is of interest to me because he employs principles of the Kelly operation in addition to some from the older techniques which were advocated but were later discarded. Love employed the thyrotomy approach, as did Hoover, but he removed the arytenoid in addition to performing a submucous resection of the vocal cord. Postoperative infection with subsequent scar tissue formation was responsible for many of the failures in these operations. Since the advent of chemotherapy and antibiotics most of these hazards have been removed. The most important contribution from the King operation was the extralaryngeal approach which avoided scarring in intrinsic larynx. However, Thornell has within the last few years devised an intralaryngeal approach which seems to give satisfactory results. It is my opinion that before penicillin both of these procedures would have been of questionable value. The antibiotic agents have made possible results which before were impossible.

I believe that Dr. DeBord's procedure offers a simplified technique which is applicable without the physician previously having performed the operation on cadavers in the dissecting room. The complications I would fear in this operation would be postoperative infection with scarring and webbing of the anterior commissure of the cords. Also, it would be difficult to check with the anterior commissure scope to see the amount of abduction of the cord which has been secured by operation. The extralaryngeal operation requires only a little more preliminary training and it leaves the mucosa of the larynx intact, avoiding scar formation in the region of the glottis. For these reasons I think that it is the preferable procedure.

DR. DEBORD, closing: Dr. Barrett mentioned postoperative infection as a possible complication to the intralaryngeal arytenoidectomy. I believe if the antibiotics are used, one will have little trouble from this standpoint, and one is by no means assured that infection will not occur if the extralaryngeal approach is used. I understand that it is not unusual for the laryngeal mucosa to be accidentally incised when the extralaryngeal approach is used.

REDUCTION OF PREMATURE MORTALITY
Methods Used in the Dallas City-County Hospital To Lower Mortality

HALCUIT MOORE, M.D., Dallas, Texas

DURING the past few years considerable interest has been manifested in the problem of lowering the mortality among premature infants. Dunham[2] in her manual entitled "Premature Infants" reports that of 3,000,000 births which occur in the United States every year, 150,000 (5 per cent) may be conservatively considered to be premature. Helm,[4] writing in a recent issue of the TEXAS STATE JOURNAL OF MEDICINE, stated that the premature infant ordinarily contributes 5 per cent of live births but is responsible for 50 per cent of neonatal deaths. The important role of the public health officer is emphasized in a recent article by Bundesen,[1] who points out that in Chicago in 1951, 8.2 per cent of all births were premature, yet 69.8 per cent of neonatal deaths were in premature infants.

The American Academy of Pediatrics has helped afford better care for premature infants by including this problem as one of its major objectives. An appeal for saving these small patients is presented by Smith[8] in his essay "The Valley of the Shadow of Birth." The important role of the obstetrician is stressed by Taylor[9] and his co-workers, who stated that premature infants born from uncomplicated pregnancies and labors have but an 8 per cent mortality compared with a 37 per cent mortality when the pregnancy was complicated. Masters and Ross[5] of St. Louis have demonstrated what can be accomplished when obstetricians and pediatricians join in an intelligent and coopera-

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tive effort to give the premature infant a better chance for survival. They have achieved a mortality rate of 10.7 per cent for the years 1945 to 1948. Gordon[3] is one of the pediatricians who has contributed greatly to our knowledge of improvement in the care of these infants. During the years he was in Denver, the mortality rate among premature infants at the Colorado General Hospital averaged 13.2 per cent.[3]

In contrast to the low mortality rates just quoted, many communities have a mortality rate of from 40 to 50 per cent for premature births. At the City-County Hospital in Dallas (Parkland Hospital) the mortality rate for the years 1941 through 1945 was 46 per cent. As a result of concerted action to improve the care of these infants, the rate has been reduced to 16 per cent for the past few years.

Figure 1 shows the decline of the mortality rate in Dallas during the past ten years from a level of 40 deaths per 1,000 live births to a level of 28 deaths for the past three years. The greatest single factor in the lowering of this mortality rate is the salvage of many premature infants who formerly would have died.

In 1946 the Department of Pediatrics of the Southwestern Medical School in Dallas decided to take a strenuous action to improve the distressing situation of the premature babies cared for at the City-County Hospital (Parkland Hospital). The first step was to appoint one pediatrician to be in continuing authority and to assume full responsibility for this group of babies. In the past, a different visiting physician was in charge for each month of the year. The next step was to make a survey of the records of all premature infants cared for at the hospital during the previous five years. This revealed a mortality rate of 46 per cent. The experience of medical centers in other parts of the United States was obtained by writing to pediatricians in those cities. A pediatrics professor at one of the large medical centers replied that the mortality rate among premature infants will vary from a low of from 10 to 15 per cent to a high of from 45 to 50 per cent, depending on the time, effort, and money which is spent on the problem.

Before launching the new campaign to improve the care of the premature infants at Parkland Hospital, the matter was discussed with several obstetricians and pediatricians in Dallas. Further advice was obtained from visiting pediatricians who were attending medical conventions and giving special lectures at the medical school. Also, valuable help and counsel came from several government agencies with experience in this field, namely, the Children's Bureau, the State Department of Health, and the City Health Department of Dallas. During this planning, we were constantly working with the superintendent of nurses at Parkland Hospital and with the nurses she had assigned to the premature nursery. Arrangements were made for some of the nurses to spend several months attending postgraduate courses at premature nurseries in other cities. The State Health Department paid for this training.

One of the features which contributed greatly to the success of our campaign was the daily ward visit to the nursery. Not only did this afford the opportunity to consult with the resident and intern and help them with each problem or difficulty, but also the visit furnished great inspiration to the nurses, who could be confident that any problem they had would receive careful consideration on that day. A method found profitable was to review in detail the case of each baby who died. This included discussions with the obstetric staff and with the pathologist who performed the autopsy.

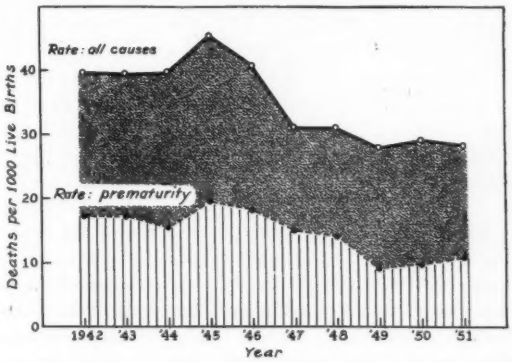

Fig. 1. Graph showing the infant mortality rates for Dallas, including full term and premature infants. The infant mortality rate for all of Texas for 1950 was 37.3 per 1,000 live births, the lowest rate ever experienced by Texas.

One of the major problems was to improve the morale of the persons working in the premature nursery. It was difficult to keep the doctors and nurses working harmoniously; especially was morale at a low ebb during the excessive heat of the summer. The babies required extra feedings of water and even parenteral fluid to prevent dehydration during the hot weather. Without such extra care, the small babies would wilt like flowers in the hot sun. These adverse conditions were gradually overcome and there was generated a spirit of enthusiasm and diligence which spread to all the hospital staff. Frequently the resident pediatrician visited the nursery again in the night to be sure each baby was properly hydrated. Much of the difficulty was eliminated by the installation of air conditioning equipment, and the nursing care of the babies was made easier by elaborate remodeling which transformed the old nursery into a modern unit with the best equipment available. Yet it is important to realize that the mortality rate was

reduced to 16 per cent before the nursery was remodeled. In other words, good results cannot be expected merely by having good equipment and air conditioning.

Tables 1 and 2 show the mortality experience for premature babies at Parkland Hospital for the past few years.

TABLE 1.—*Statistics on Premature Babies at Parkland Hospital.*

Year—	1947	1948	1949	1950	1951
Premature births	203	248	272	335	351
Deaths of premature infants	34	39	45	64	57
Mortality rate	16.7%	15.7%	16.5%	19.1%	16.2%

TABLE 2.—*Mortality Statistics on Premature Babies for 1951 According to Birth Weight.*

Birth Weight (Gm.)	Babies	Deaths	Mortality Rate (%)
0-1,000	20	19	95
1,001-1,500	50	25	50
1,501-2,000	72	7	9.7
2,001-2,500	209	6	2.8
Total	351	57	16.2

Not counting babies weighing less than 1,000 Gm., the corrected mortality was 12.1%.

In this discussion, detailed description of the nursing and pediatric procedures employed in the nursery have been omitted. These matters are outlined in a nine-page manual which is studied by all nurses and doctors assigned to the unit. It is significant that no new medical procedures were employed to bring about the successful lowering of the mortality rate. Methods and knowledge which have been recognized for years as standard procedure were applied.

Considerable credit for saving the lives of 84 per cent of the premature infants at Parkland Hospital must be given to the doctors in the Department of Obstetrics because it is largely their skill in delivering these babies that makes it possible for the pediatricians and nurses to achieve such a high degree of success.

Dr. William F. Mengert,[6] professor of obstetrics at Southwestern Medical School, is vitally interested in this problem. His teaching has helped greatly to minimize the obstetric hazard of premature birth. Dr. Mengert has outlined the following points as basic rules for the management of premature labor:[7]

1. If the patient is in labor, make no attempt to stop labor.

2. When premature labor is imminent, give the patient vitamin K intramuscularly.

3. Use no first stage analgesia.

4. Use no inhalation anesthetic.

5. Conduct delivery under spinal, caudal, or pudendal anesthesia.

6. Use episiotomy generously, especially if there is any doubt that the vulva may be tight.

7. Outlet forceps operation also may be helpful.

It is apparent that many people have contributed greatly to the effort of saving these premature babies, yet the price is small when it is considered that at Parkland Hospital each year 90 babies who previously would not have survived are now sent home alive and well.

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ABSTRACT OF DISCUSSION

Dr. HARRIET BATES, Dallas: The problem of the premature infant revolves around the care of that infant. Such care includes (1) constant observation and attention by specially trained personnel, (2) maintenance of proper environment, (3) prevention of infection, and (4) proper nutrition.

The author has presented the manner in which these problems are being met at the Dallas City-County Hospital. The importance of the first step, that of placing the problem in the hands of one continuing authority, must be emphasized, as one guiding intelligence is all important in such a problem. There cannot be continued good care with changing authority, either medical or nursing. The same may be said of the other measures instituted in our nursery, particularly the adoption of a routine procedure making use of accepted pediatric methods for care of the premature infant and the establishment of better rapport between the obstetric and pediatric services as regards the immediate care of these infants. The wisdom of such measures has been amply shown in the author's tables.

An analysis of these tables reveals some interesting figures. In 1951, there were admitted to the Parkland premature nursery 351 babies, of whom 331 weighed more than 1,000 Gm. Of this group, 37 infants died. As well as could be determined from the records of these 37 infants, the greatest cause of death was intracranial hemorrhage, due either to trauma or anoxia; this was the primary cause of death in 11, or 30 per cent of these infants. Infection was the second leading cause of death; 9, or 24 per cent of the babies were in this group. A multiplicity of causes accounted for the remaining 46 per cent of the deaths. Among these were asphyxia from pulmonary hyaline membrane, congenital anomalies, hemorrhagic disease, and aspiration.

This rough break-down of the mortality statistics shows the importance of good obstetric care to improve the quality of the babies sent to the premature nursery, as well as stresses the importance of aseptic technique and careful attention to isolation procedures, for the majority of deaths from infection are preventable.

We are looking forward to the completion of the new Memorial Hospital with the hope that the improved premature nursery facilities will attract and hold more trained personnel and will promote a better training program in the care of these infants. In the near future, we expect to have one resident physician whose only duty will be to supervise the care of the premature infants. This will be another step toward a better training program.

All of these factors are important parts of the problem of reduction of premature infant mortality which Dr. Moore has so well presented.

SOME IMPLICATIONS OF THE TERM "WHOLE CHILD"

C. C. MORRIS II, M.D., Galveston, Texas

MODERN medicine has achieved an honorable status among human institutions, and this position has been reached largely within the past two hundred years. The tremendous advances made during these past two centuries have been possible almost exclusively because of an insistence on finding the morbid anatomy which underlies symptoms and complaints. Medicine is what it is today because of the tremendous progress made possible by an orientation in organic pathology. In fact, so thoroughly are doctors indocrinated with this faith in the organic theory that some of us now are convinced that no disease exists unless abnormal physical findings can be demonstrated. During the past hundred years at least, a highly competitive "Easter-egg hunt" has been on to discover just what particular cell changes are responsible for some particular clinical entity. Thousands upon thousands of medical investigators are on a hypomanic spree of fact-finding and have so assiduously refined their investigative techniques that structural changes are recognizable long before they lead to grossly visible lesions.

Out of this beehive of successful medical activity has sprung the assumption that some single physical agent can be identified as the necessary cause of disease. The human body is a sort of slot-machine. One puts in a couple of typhoid bacilli and out comes typhoid fever; a small amount of mercury is put in and out comes a kidney lesion; some cigarettes are put in this "machine" and out comes a carcinoma. By and large this view of disease has worked pretty well. A person is sick if he demonstrates some physical abnormality; and if he has such an abnormality, the doctor's job is to identify the causative physical agent and then neutralize it.

Especially during the past decade, there has been an accelerating dissatisfaction with that explanation. On several counts the traditional organic theory of disease has been felt to be inadquate.

Read before the Section on Public Health, Texas Medical Association, Annual Session, Dallas, May 6, 1952.

In many acute conditions such as acute infections and accidents, the organic theory fails to explain why some persons are subject to such episodes whereas others with comparable exposures are not.

In many chronic conditions with obscure etiologies, courses, and remissions such as rheumatoid arthritis, diabetes, the various allergic syndromes, nephrosis, and obesity, the organic theory fails of explanation.

So-called behavior problems, or character disorders, are excluded from serious consideration by the organic theory. It pays attention almost solely to physical health and thus has little or nothing to say about the majority of people who seek medical attention, people with complaints for which there is no apparent physical basis.

Finally, the organic theory has no applicability at all in discussions of such medical matters as the doctor-patient relationship, the individual physician's satisfaction with his practice, the effectiveness of medical education, the role of the physician in the life of a community, the education of a handicapped individual, the interdependence of the medical with other professions, and many other important questions.

"WHOLE CHILD" THEORY

Because of these deficiencies of the organic theory, a wider concept of disease and health is being considered, a concept which in pediatrics is frequently symbolized by the term the "whole child." This broader concept may be stated thus:

All the events that impinge upon a person during his life induce in him a certain state, which may be called a state of feeling, which prepares the soil in him for the appearance of those changes that we call behavior, including changes in physiologic functioning and in tissue structure. Another way of expressing this would be to say that the appearance of diseased tissue, or physiologic malfunction, or behavior disturbance is an outgrowth of all the past events of the person's life. An extremely important corollary of

this concept of "the whole child" is that the causation and the treatment of illness is not adequately understood except in terms of the patient's entire past life-history.

By way of illustration gastric ulcer is now well known to occur in persons who live "a tense hectic sort of life and who are prone to worry and have feelings of resentment and uncertainty . . . Ulcers form readily in the stomach of a person whose gastric physiology is deranged due to his state of mind."[3] There is now a voluminous medical literature[2] which points up the fact that disease of almost any tissue of the body is not well understood if it is thought of only in terms of organic pathologic conditions without reference to the patient's "state of mind."

IMPLICATIONS

This paper does not attempt to prove or disprove the validity of this concept of human health and disease; instead it suggests some of the many implications of this broader orientation.

1. To the adequacy of the proffered diet, to the genetic inheritance, to the climatic conditions, to the broad spectrum of pathogenic bacterial agents, and to the other already well recognized factors influencing the health of a child, a new and important class of events must be added, that is, the attitudes of the adults who surround the child. If these attitudes are beneficial, his health on the whole will be good; but if he is rejected and unwanted, his health on the whole will be poor. For example, rheumatic fever with its carditis and its grim prognosis appears because the soil has been prepared by the rejecting over-protective attitudes of the patient's parents, usually the mother. Consequently, prevention of this illness implies a widespread attack on the whole problem of child rearing. Dozens of pathologic conditions about which the same comment might be made could be mentioned.

2. Not only must preventive medicine employ the techniques of mental health but so also must therapeutic medicine, in order to be effective. In such conditions as chronic malnutrition, repeated respiratory infections, fracture of the bones, recovery from surgical operations, and other entities in which tissue healing is expected, the theory of "the whole child" implies that adequate management must include provision for mental health and happy emotional adjustments.

3. Hospitalization of children needs to be reconsidered and a new medical viewpoint adopted. Hospitalization is itself an important event in the child's life and has various repercussions on his health and on recovery from disease. Little or no provision is made in hospitals to regulate, control, or apply healthful attitudes on the part of the hospital personnel. The impersonal and even negligent atmosphere that prevails in some hospitals is deleterious to the patient.

4. The general medical practitioner frequently feels insecure and inadequate in his attempts to treat his patients. He often recognizes that medicines are powerless with many of his patients, yet his grounding in organic theory makes him feel that he is not a competent doctor unless he prescribes some sort of medicine. It is impossible to compute how many millions of dollars annually are wastefully and sacrificingly spent on needless vitamins, blood tonics, sedatives, antibiotic drugs, hormone preparations, and other such items. The theory of "the whole child" implies that the physician's attitudes, in their effect upon parent and child, are as important as and usually more important than the most potent drugs.[1] In this light the general practitioner becomes the most important figure in the medical hierarchy, since he is in the most advantageous position to gain information and insight into a patient's state of mind and to take steps to apply long-range therapeutic attitudes. Human attitudes toward the patient are themselves powerful agents in either the production or the prevention of disease. Making controlled and rational use of human attitudes as part of the medical armamentarium now has well founded objective evidence to support it.

Incidentally, this implies improved doctor-patient relationships, ascribes pathogenicity to the brusk, impersonal, often hostile and rude attitudes that some physicians adopt toward their patients, and gives strong sanction to the kindly human practitioner who is sympathetic and friendly.

5. The "whole child" theory implies that medical education needs to be thoroughly revamped. Medical students, interns, and specialty residents continue to be propagandized almost exclusively in terms of organic pathology, and the implications of the whole child are either ignored or else scoffed at openly.

6. The suggestion that all the events of a patient's life affect his health implies that many community factors are far more important than has been considered. For example, insecurity concerning his employment will lower a parent's morale and his attitudes toward his child then will deteriorate, thus affecting the child's health directly.

The attitudes of personnel in the school system, of course, play a significant role in the child's make-up, for good or for ill, and thus the schools too are responsible agents in the patient's health status.

In the light of the "whole child" theory, disease becomes the result of community activity and interdependence. Public health departments may find themselves involved in prevention on a far broader front than has been thought necessary heretofore.

The medical profession as a whole may come to recognize that its members are not the sole arbiters in matters of health, but are only one cog in the complex community factors which have to do with health and disease.

7. Finally, acceptance of the "whole child" theory implies community education as a pressing medical responsibility, leading to broadly expanded educational programs covering the entire range of human activity.

SUMMARY

Many physicians, indoctrinated with the organic theory of medicine, believe that no disease exists unless abnormal physical findings are noted. More and more persons in the medical profession are realizing the inadequacy of the theory that a single physical agent is the necessary cause of a disease, and that a person is sick only if he demonstrates a physical abnormality. Some manifestations of certain acute and chronic conditions are unexplainable by the organic theory and character disorders are not considered.

Because of these deficiencies in the theory, a wider concept of disease is being adopted. In pediatrics it is symbolized by the "whole child" theory, which holds that diseased tissue, physiologic malfunction or behavior disturbance is an outgrowth of past events of a person's life and that a child's illness is not understood except in terms of his entire past history.

Implications of this concept of the relationship of mental health and disease include the following:

1. The attitudes of adults influence a child's health.
2. Techniques of mental health must be employed in therapeutic as well as preventive medicine.
3. A new medical viewpoint of hospitalization of children must be adopted.
4. Human attitudes are an important part of the medical armamentarium, especially of the general practitioner.
5. Medical education needs revamping to explain the "whole child" theory to medical students, interns, and residents.
6. Community factors are more important in health problems than is usually considered.
7. Community education is a pressing medical responsibility.

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ABSTRACT OF DISCUSSION

DR. BAIN LEAKE, Gladewater: The impetus to the amazing progress of medicine has been due to the organic theory of disease. Were it not for the painstaking study of hundreds of brilliant workers in this field, medicine would still be in the Dark Ages.

According to this theory, every disease must be associated with some demonstrable tissue change. These diseases we label organic, but there are many diseases which defy the most careful search for tissue changes. The latter diseases we call functional. It is generally agreed that one-third of all diseases are organic, one-third functional, and the remainder are a mixture of both organic and functional diseases.

The causes of organic diseases, such as those caused by bacteria, viruses, trauma, and physical agents, do not require enumeration. The common causes of functional diseases may be listed as poor heredity, emotional strain, tension, and personal tragedies. It is difficult for the lay mind to conceive how an emotion can cause a physiologic change, but the simple explanation of the phenomenon of blushing will suffice. It is an easy step from here to explain the relationship between the hard-driving, tension-ridden, and often inadequate personality of the ulcer victim and his duodenal ulcer.

Dr. Morris graphically directs attention to the fact that we physicians should consider the child not as an organism having a predilection for organic changes, but as a person with sensitive and impressionable emotions. He points out that physical and mental health are influenced not only by diet, climatic conditions, trauma, and bacteria, but also by heredity, environment, and attitudes of parents, teachers, and others entrusted with guidance.

It seems that the medical profession has succeeded only partially in grasping the opportunity to treat the "whole child." Perhaps our attention has been too sharply focused on possible organic changes. For example, in searching for the cause of enuresis, we are apt to overlook the obvious emotional disturbance and request a urologic survey.

The reason for this type of thinking is understandable. Physicians have been taught to think in terms of organic disease throughout four years in medical school, during internships and residencies. Many teachers were doctors of philosophy or specialists, adequately trained only in their own fields. The finished product of this type of medical education has a highly specialized knowledge of one small field in medicine. How much understanding of the "whole child" or of the "whole man" can we honestly expect from him?

There has been a genuine attempt by many schools within the past few years to introduce courses in psychosomatic medicine. These attempts have met with some success. There has been a general awakening to the realization that there is a "psyche" as well as a "soma."

Although we doctors have been trained in the school of cellular pathology, we must recognize the "whole child" and the "whole man" and attempt to keep abreast of the trend through the current medical literature. Finally, physicians can lend time, patience, and sympathetic understanding to these patients, to their parents, and to their problems.

Dermatological Association Essay Contest

A prize of $300 for the best essay relating to some fundamental aspect of dermatology or syphilology is being offered by the American Dermatological Association. Manuscripts must be submitted not later than January 1 to Dr. Louis A. Brunsting, secretary, 102-110 Second Avenue, S. W., Rochester, Minn. Further information regarding this contest may be obtained by writing to Dr. Brunsting.

WHAT CAN BE DONE FOR THE ALLERGIC CHILD?

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THE incidence of allergy encountered in routine pediatric practice is considerably higher than that stated in the textbooks by allergists, due to the fact that the allergist sees only the more severe cases and that most such specialists restrict themselves entirely to allergic diseases. It is important to realize that there are many children with allergic symptoms because it is only by being aware of the great frequency of these manifestations that one will be alerted to diagnosis and treat them properly.

The diagnosis often is easy. It is eczema, hay fever, perennial rhinitis, or asthma. At other times only close questioning will reveal allergic symptoms. In the neonatal period the skin and the gastrointestinal tract are chiefly involved. After the first month the skin disease is usually eczema, which is often associated with seborrheic dermatitis, and gastrointestinal symptoms are more common. Clein[3] has described these symptoms in complete detail. Signs referable to the respiratory tract become evident in this period. These signs consist of excessive sneezing, frequent nose colds (sometimes present from birth), persistent coughing, and asthma. The child over 2 years of age has less gastrointestinal symptoms, fewer skin rashes, but more complaints referable to the respiratory system. Asthma and allergic rhinitis, chiefly of the perennial type, become more common. I have seen few children with only pollinosis.

In the family history if both parents have classical allergic diseases, it is unusual to find that the children have escaped some allergic disturbance. A negative family history does not necessarily indicate absence of allergic disorders. It may mean that the parents have not yet developed an allergic disease or that it has skipped their generation. Statistically a negative family history implies that allergic disorders are less likely to occur. The whole problem is now under critical survey. A recent paper by Ratner and Silberman[8] casts considerable doubt on the hereditary factors in allergy.

The physical examination may show a child with sallow, washed-out facies. He seems anemic, yet the hemoglobin and red blood count are within normal range. In such patients with severe symptoms there is usually evidence of malnutrition and poor development, but occasionally children who have been disturbed by asthma appear husky and healthy. The presence of pale bluish-gray, swollen nasal mucous membrane with watery discharge is a characteristic finding. There may be a superimposed infection which will confuse the picture. A prolonged intensive course of antibiotic drugs will clear up the sinusitis, bronchitis, or secondary skin infection and the real nature of the disease becomes evident.

Frequent nasal smears are sometimes needed to prove the diagnosis. If the child blows his nose into wax paper, it is necessary to pick out strands of mucus. In younger children a cotton tipped applicator moistened with saline solution is rubbed along the inferior turbinates. An unsatisfactory smear will be obtained if the nasal discharge is very watery. Hansel's or Wright's stain if properly used is satisfactory. I prefer Hansel's stain because of the sharper delineation of the eosinophils.

A therapeutic trial of epinephrine, antihistamines, or the elimination of inhalants or foods may greatly help in confirming the diagnosis.

TREATMENT

The treatment of any allergic problem is time-consuming because of the many aspects of a disorder that usually are chronic. The chances of successfully treating a case are in direct ratio to the time spent with each child and his parents. The initial interview may consume one to two hours.

During this time the physician has impressed the parents by his countless questions that he is concerned with every detail of the child's life. He not only wants to know about his diet, illness, growth, development, fuzzy toys, and feather pillow, but he wants to know how he sleeps, eats, and plays. How does he get along with other children, with his teachers, with his parents? What kind of parents does he have and how do they feel about their children? The psychosomatic aspects of allergy are extremely important. During the interview first steps are made in teaching the parent how to prevent and treat the problems of allergy.

General Measures

Certain general measures should be instituted in every allergic case. These relate to (1) diet, (2) environment, (3) infection, (4) psychogenic factors, and (5) education of the child and parents.

Diet.—It is not difficult in the infant or young child to begin with a diet that eliminates most of the common allergens. In the infant a soybean formula may be substituted for milk. In slightly older children the basic constituents of a diet, namely, meat, fruit, vegetable, cereal, egg, milk, and vita-

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mins, can be selected from the foods least likely to be allergenic as follows:

Meat—lamb.

Fruit—pear, pineapple.

Vegetable—beets, squash.

Cereal—rice.

Egg—only the yolk of a hard boiled egg in which the albumen has been thoroughly washed off; egg yolk rarely gives trouble.

Milk—omit for one week.

Vitamins—A, C, and D in a synthetic preparation.

Every three to four days a new food is added. At times spectacular results are observed. If no apparent effects are noted, then a rotation diet is used; that is, a different fruit, vegetable, cereal, and meat are used each day. A food under suspicion may be given in excessive amounts for a few days and the reaction observed. Milk, egg, wheat, nuts, peanut, tomatoes, orange, chocolate, and fish are the more common allergens. However, foods are usually not important allergens in my experience.

Environment.—Deamer[4] pointed out that the average child spends twelve hours in his room. The remainder of the time is spent at school, outdoors, and in the rest of the house. The entire home need not be stripped bare, but in the child's room wool rugs, feather pillows, cotton mattress, fuzzy toys, and heavy drapes should be removed. Many children can do without a pillow. The mattress must be covered with a heavy plastic material. Although cats, birds, and dogs are the usual pets, occasionally a child has a rabbit, duck, chicken, horse, or even a pet boa constrictor. Most of these can be removed. A dog rarely gives trouble.

Cooking odors, temperature changes, and excessively low humidity may be precipitating causes of asthma or rhinitis. Often the mother says, "Each time my child takes a bath or the weather changes, he develops a cold or wheezing." In such a case the child should be bathed as little as possible and in a warm room. The child should be brought indoors before it gets damp and cold in the fall and winter afternoons. The windows should be closed in his room, the air coming from another room. If central heat with dry hot air is used, the ventilator in the child's room may be closed and an electric heater used. When the humidity falls, a vaporizer using water without any medication, will aid in precipitating the dust and keeping the secretion of the respiratory tract moist. The heavily scented soaps, colognes, perfumes, and tooth pastes are occasionally irritating and should be removed.

Infection.—The role of infection in allergic diseases is still in great dispute. There are those who contend that it is merely a trigger mechanism; that is, if the underlying antigen-antibody disturbance is cleared up, the infection will not set up an attack of asthma. This has been my experience in a number of cases. There is another large group of investigators who are firmly convinced that the focus of infection in the sinus, tonsils, adenoids, and lower portion of the respiratory tract must be removed if the child is to be helped. Most pediatricians believe that infection precipitates an attack and that control of the infection will aid greatly in preventing severe episodes. There are a group of allergic children who do fairly well in the warm weather but who have frequent respiratory infections often associated with asthma from October to April. These children are definitely allergic and skin testing will show sensitivities to inhalants or foods.

Stock cold vaccine will help reduce the number and severity of infections in some children, usually it is more effective in younger children. I give 0.1 cc. of vaccine every four to seven days subcutaneously and increase the dose by 0.1 cc. to 0.2 cc. each visit until 1.0 cc. is reached. Then 1.0 cc. is given every four weeks. Some children will not tolerate more than 0.6 or 0.7 cc. Other children have done well with the same technique of prophylaxis used in rheumatic fever, namely, the administration twice daily of 7½ grains of sulfadiazine, 100,000 units of penicillin, or 50 mg. of Aureomycin or terramycin. If these measures fail, skin testing with specific hyposensitization should be instituted. Roentgen-ray and radium have been used. Treatment is directed to the nasopharynx and the peritracheal and peribronchial areas. Irradiation occasionally is helpful in patients who fail to respond to all other measures.

Psychogenic Factors.—What makes the allergist's problem so difficult at times is that he is dependent, as is any other physician, upon a scientific theory, namely, the immunologic theory of the antigen-antibody. Thus when he treats an allergic child by either removing the offending allergens or by hyposensitizing him and thereby achieves a good result, he feels satisfied. But in those children who do not respond, he must consider a variety of other factors. Some of these, diet, environment, and infection have been mentioned. The importance of psychogenic factors also cannot be overlooked.

It is not necessary to imply that all causes of asthma or eczema are due to emotional imbalance, but it is true that the inability to recognize the underlying tensions engendered by lack of security and understanding, by rejection or overprotection will lead to failures in the treatment of the chronically allergic child. The mechanism through which these psychodynamic forces probably operate is the production of

stress which in turn affects the pituitary-adrenal system. This process has been described by Selye.

Education.—An appreciation of the problem by the parents and the children must be encouraged. The chronicity, prognosis, and way of life must be discussed. Much of this can be accomplished in the initial interview.

Specific Conditions

The treatment of some of the more common allergic disorders will now be discussed in detail. In every instance control of diet, environment, infection, emotional factors, education of the parent, and child care are carried out as just described.

Eczema is an unsatisfactory disease to treat. In my experience eczema gets well quickly with simple treatment or it becomes a chronic problem of a rather severe nature. There are numerous lotions, ointments, and creams available, but it is best to learn the use of a few simple preparations.

The infant with a papular vesicular eruption appearing in the first few months of life and confined chiefly to the face and scalp is treated by using (1) nonallergenic soaps, (2) as little water as possible, (3) Carbonis Detergens cream, (4) synthetic vitamins, (5) sunshine, and (6) avoidance of all oils and lotions. This type of lesion is usually not pruritic. The eczematous infant is uncomfortable because of the severe itching. If the lesions are wet or secondarily infected, wet packs of aluminum acetate (Burow's Solution) are applied. A convenient method to make this is by dissolving 1 package of Domeboro powder in 16 ounces of water. Antibiotic agents are given systematically for the infection. Care must be taken to avoid maceration of the skin. As the skin becomes dry a 5 per cent crude coal tar ointment* is applied; this is later increased to 10 per cent if there is much lichenification. For the new tender red skin a bland ointment† is rubbed in well. In treating children who are sensitive to tar, Swartz's ointment‡ may be used. Water should be avoided as much as possible, and nonallergenic soaps such as pHisoderm, Lowila, or Almay should be used. Aveeno is a good detergent and is helpful in relieving the itching. The skin is bandaged with strips of an old pillow case or sheet and over this an Ace bandage is placed. Phenobarbital helps to relieve the restlessness and itching. Antihistaminic drugs may help if given orally. When applied to the skin, they are not effective and often will cause sensitivity. In younger infants one tablespoonful of lard or vegetable oil three times a day for several months may be helpful. Very resistant cases should be skin tested. A few are sensitive to inhalants and desensitization treatment may produce a cure.

	Gm. or cc.
*Crude coal tar	2.5
Zinc oxide	5.0
Starch	15.0
Petrolatum, in sufficient quantity	
To make	50.0

	Gm. or cc.
†Zinc oxide	12
Starch	12
Milk of magnesia	8
K-Y Jelly	
To make	1 tube

	Gm. or cc.
‡Mercurochrome crystals	1.0
Water, in sufficient quantity	
Salicylic acid	1.5
Petrolatum	or
Lanolin, each in sufficient quantity	
To make	50.0

Gastrointestinal symptoms due to allergy in infants do not produce a characteristic picture. There may be excessive crying, hunger, straining at the stool, diarrhea, colic, and "lots of gas." The more severely ill infant will present signs of obstruction or shock with marked apathy and anorexia. After a complete physical examination including a digital examination of the anus has been made, sedatives, antispasmodic agents, and formula changes should be tried. Some authors have made smears from the rectal mucosa for eosinophilic study. This has not proved too successful for me. The simple therapeutic trial with either soybean or Nutramigen for three to four days will be readily accepted both by the infant and parent.

There are a few practical hints about the use of soybean formulas. The nipple holes must be enlarged. Diarrhea can be overcome by boiling the mixture in a double boiler for thirty minutes, by diluting the mixture, or by the addition of Kaopectate or Kaomagma. Sedation may be necessary for a few days while the infant becomes accustomed to the new regimen. It should be remembered that infants may become sensitive to soybean.

Allergic rhinitis may begin in the first few months of life but is more common after the first year. The basic allergic disorder is almost always aggravated by infection so that in most children observed between October and April, a picture of allergic rhinitis and infection is encountered. These children usually have their tonsils and adenoids removed at an early age because of frequent otitis media and tonsillitis. A few definitely are benefited by the procedure, chiefly because of the increased airway. I have not found that removal of tonsils and adenoids in these children precipitates asthmatic attacks. It is well to point out to the parent that the allergic process stimulates the growth of the lymphoid tissue in the nasopharynx and after tonsillectomy and adenoidectomy, no matter how well these operations are performed, there will

be considerable regrowth if the allergy is not controlled.

Treatment consists in adherence to the general principles previously outlined. At times spectacular results are obtained with the elimination of foods. This is always worth trying. Cold vaccine occasionally is helpful. In some children prophylactic doses of antibiotic agents are successful. Roentgen-ray treatment may be used. Antihistamines will help the milder cases. All efforts to prevent chilling should be instituted since this group is prone to develop a "cold" with each change of weather or with a bath. If all these efforts fail and the child is having a great deal of difficulty, skin testing with specific desensitization is indicated. Results are not nearly as satisfactory as in asthmatic children.

Asthma is often associated with allergic rhinitis and the treatment is similar in both conditions. Children less than the age of two years are not commonly observed to have asthma. In this younger group elimination of foods may be helpful. The children usually are irritable and unhappy, with frequent rather severe respiratory infections and asthmatic attacks. Often they are retarded mentally and physically. Contrary to popular belief, specific treatment is often successful in this age group, Buffum[1] has reported, and his observation confirms my findings.

The asthmatic child and his parent need a short course in the physiology and pharmacology of asthma so that they can handle the acute attacks. The earliest onset of an attack must be recognized. In some, antihistamines are remarkably effective in warding off a severe wheezing spell. If several different antihistamines have been tried without success, their use should be abandoned and another group of drugs which combine ephedrine, phenobarbital, and aminophylline should be employed. Bed rest, forcing fluids, and the use of a vaporizer are helpful. If the attack proceeds without abatement, then 10 mg. of Isuprel hydrochloride sublingually and/or aminophylline suppositories may be used. Unfortunately, the suppositories sometimes cause intractable vomiting. Nebulizers may be used with Isuprel hydrochloride 1:200, Aerolone Compound, or epinephrine 1:100. A physician in our clinic has used a Vaponefrin mask attached to the nebulizer for use in infants and young children with excellent results. Enough drug is obtained by squeezing the rubber hand bulb one or two times. In the acute severe attack epinephrine 1:1000 hypodermically in doses of 0.2 cc. given at twenty minute intervals for three to four doses is the drug of choice. It often causes vomiting of short duration, which is a helpful process in the younger asthmatic patient. Active therapy with drugs such as ephedrine, aminophylline, and iodides should be continued for from four to seven days after a severe attack since vital capacity will not return to normal for about a week. In some children a saturated solution of potassium iodide, 5 drops three times a day in milk, is continued for long periods of time along with prophylactic doses of antibiotic drugs. Too much sedation with either codeine or barbiturates should be avoided, and morphine or atropine should never be used.

PROPHYLACTIC AND MENTAL APPROACHES

Prophylactic measures are worthy of a try. If both parents or the siblings are allergic, the chances for the newborn infant to be allergic are greatly increased. This problem should be explained to the mother so that every effort to breast feed the baby will be made. Synthetic vitamins are used. Medicated baby oils and lotions are avoided. One food is added at a time. After from three to four days a new food is tried. The environmental and psychologic factors are controlled.

The exact number of children who "outgrow" their allergies is not known. Probably from 20 to 30 per cent, but I do not know how reliable these figures are. Many times a parent will say, "My boy is fine now; he has no more asthma," and yet it is obvious that he has frequent respiratory infections and typical allergic rhinitis of a moderate to severe degree. It seems inconceivable that any child who has severe allergic rhinitis or asthma for a long period will not be left with some residual scarring. This may be in the form of delayed growth, emphysema, chronic bronchitis, nasal polyps, hyperplastic sinusitis, or emotional trauma. Moreover, his chances of getting well are dependent to a large extent upon his being free of disease for a long period. It would appear that the severely allergic child should be treated fairly early rather than after he is malnourished, poorly developed, and unhappy. This child has watched his classmates and friends pass him by.

Often physicians are asked what child should be referred to an allergist and be skin tested. If dietary and environmental factors cannot be controlled; if cold vaccine and antibiotic drugs fail; and if the family is unable to cooperate in providing proper care, specific treatment should be instituted. What can be expected from the specific treatment given by the allergist? If the entire child, and not his allergy alone, is treated, about 75 per cent will get excellent results, from 10 to 15 per cent will get good results, and about 10 per cent will get fair to poor results. The expense of treatment should be discussed. Often specific treatment by the specialist proves to be cheaper than going through several severe illnesses.

But, more than anything else the parent and child develop confidence and self-reliance and achieve an optimistic attitude.

It is imperative that one maintain an optimistic approach. It is unfortunate that many doctors still take the view (1) "He will probably outgrow it," (2) "What can you do?" or (3) "I am allergic to allergy." The results of good treatment speak for themselves.

SUMMARY

Many infants and children suffer from such allergic conditions as asthma, eczema, intestinal disorders, and a nose that is blocked, itching, and running all the time. Some of these children will "outgrow it," the exact number is unknown. About 25 per cent of the children with these allergic symptoms get well spontaneously. However, the chances for these ailments to disappear are much greater in the child who remains well for a year or two than in the child who is constantly ill.

The family doctor can be of great help by using simple and tried methods. Attention should be paid to the five cardinal factors that pertain in almost every allergic person:

1. Dietary control—trial and elimination of foods.
2. Environmental control—elimination of dust, feathers, wool, and lint, and control of humidity, temperature, and odors.
3. Proper handling of infection.
4. Education of the parents and child about allergy; teaching the use of drugs, rest, and diet.
5. Realization of the part that emotions play in aggravating or even instituting the allergy.

With this type of approach, a great deal may be done in helping the child and in giving the parents and child an optimistic attitude in a chronic disease that has so many changing aspects in its stubborn make-up.

If these measures fail, the child should be seen by an allergist who probably will advise skin tests and specific treatment. It is important that one realize that the child is a growing organism. Persistent illnesses interfere with his growth and development and produce permanent scars in the nose, sinuses, and lungs. With proper treatment at least 75 per cent of the children will do well.

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ABSTRACT OF DISCUSSION

DR. DOROTHY WYVELL, Midland: A paper on the handling of allergic children is always timely because the problem of allergies is so universal and intricate in its ramifications and can be so frustrating. Under the constant bombardment from the pharmaceutical houses with new medicines and old medicines with new names, it is good to back off a little, compare notes, and find that still the most successful treatment of all is the time-proved ferreting out of the patient's background and attacking his individual difficulty with omission desensitization by one form or another or by psychotherapy. I thoroughly agree that the time spent in talking to the parents of an allergic child reaps a much greater reward than any other procedure.

I was particularly interested in the essayist's discussion of colic in the infant. Even though there is not yet definite proof that some colic is allergic in nature, more and more pediatricians are suspecting it and, I believe, controlling it better by anti-allergic routines. Sometimes the results are so dramatic that the next week, following the meeting of the mother's weekly bridge club, the office is flooded with colicky crying infants who unfortunately do not all respond in the same miraculous fashion.

In my relatively short practice in Midland I have seen some very peculiar allergic reactions. In one family in which there was a positive familial history of allergy, there were three children, a boy 10, a girl 7, and a boy 5. Except for occasional mild hay fever, the girl was free from allergies. The two boys, however, had rather marked hay fever and the older one had asthma which had been desensitized with vaccines with moderate improvement. Both of these boys had recurring severe febrile otitis all year around, worse in the right ear than in the left and usually following a definite respiratory infection. The older one had had a tonsillectomy without improvement; the younger one still had his tonsils. I referred these two boys to an otorhinolaryngologist in Lubbock who was particularly interested in allergic problems. He diagnosed a food allergy as the cause of the otitis and sent the youngsters home on an extremely limited diet and strict regimen. In spite of admitted disbelief on the part of both the mother and myself, we agreed to try it. To our amazement there was marked and continued improvement and with the addition of foods one at a time the mother has been able to detect certain incriminating foods which are different for the two boys and to omit them permanently from the diet. The children themselves have felt so much better that they voluntarily refuse any suspicious foods.

There are a few questions that I should like Dr. Halpern to enlarge upon:

1. Are drug allergies more frequent and more severe in allergic children, and if so, should chemotherapy and antibiotic therapy be restricted as much as possible?
2. When should changes in climate be advised?
3. What are his experiences with the newer medicines?

DR. HALPERN, closing: I will answer Dr. Wyvell's questions in order.

1. No, drug allergies do not appear to be more frequent or more severe in allergic children; and I have not restricted chemotherapy and antibiotic therapy whenever it seemed indicated.

2. Changes in climate are expensive, difficult to arrange, and often will upset the entire family life. Only seldom do

they appear to be effective, and then chiefly when the move is made to a warm, dry climate such as Arizona, with the subsequent reduction in the number of respiratory infections. I am reluctant to advise changes in climate, since the same allergens are present wherever one goes.

3. I presume that Dr. Wyvell is referring to Cortisone and ACTH. My experience with these drugs has been extremely limited, inasmuch as the severe attacks of asthma and eczema have been adequately controlled by the more conventional methods. However, in severe serum sickness or drug sensitivity, as evidenced by high fever, arthralgia and marked prostration, these drugs for a period of forty-eight to seventy-two hours have afforded relief very quickly and successfully.

MYOCLONIC SEIZURES IN INFANCY AND CHILDHOOD

FRED M. TAYLOR, M.D., Houston, Texas

IN 1946 Buchanan[2] called attention to a type of epileptic seizure which he described as a lightning major convulsion consisting of a "sudden dropping" of the head with adduction and flexion of the arms. He pointed out that such seizures generally occur in infants and that as a rule they are associated with signs of "cerebral agenesis and mental retardation." Similarly, Yannet[8] noted briefly that in "very young infants one may see mass myoclonus in which a major part of the skeletal musculature is involved in the convulsive reaction." Previously Yannet[7] had indicated that these attacks were seen commonly in mentally defective children, but he classified such seizures as phenomena associated with petit mal epilepsy. In 1950 Lennox and Davis[6] reported a more extensive study of massive myoclonic seizures which appropriately were termed "jack-knife" seizures. They described a form of electroencephalographic pattern, a "slow spike-wave" dysrhythmia, which was observed in patients subject to such attacks. However, Lennox and Davis also associated massive myoclonic seizures with petit mal epilepsy, which they considered a relatively benign disorder unassociated with mental and motor retardation. On the other hand, they correlated massive myoclonic seizures with an electroencephalogram pattern which was considered indicative of brain damage.

The purpose of this report is twofold: to give a brief account of the experiences of physicians in the Department of Pediatrics at Baylor University College of Medicine and the Blue Bird Children's Clinic with a group of 50 selected infants and young children subject to massive myoclonic seizures and to clarify the significance of these seizures from the standpoints of clinical symptomatology, mental and motor development, and laboratory investigation.

From the Department of Pediatrics, Baylor University College of Medicine, and Blue Bird Children's Clinic for Neurologic Disorders, Methodist Hospital.

Read before the Section on Pediatrics, Texas Medical Association, Annual Session, Dallas, May 6, 1952.

CHARACTERISTICS

The essential feature of a massive myoclonic seizure is the sudden lightning-like contraction of the flexor muscles of the trunk. For an instant the body tends to "double up"; hence, Lennox's apt designation "jack-knife seizure." Simultaneously there may be abrupt flexion of the arms on the chest and flexion of the thighs on the trunk. Not uncommonly the forearms are retracted so that the hands are pulled to either side of the head, in a motion similar to that of the "startle" reflex seen in young infants. This motor effect is accompanied by what may be a sudden fleeting loss of consciousness, the facies assuming a momentary blank and "shocked" expression. A sharp outcry may precede quickly or accompany the seizure. In some instances sudden noise, manipulation, or feeding appear to precipitate attacks. Similarly seizures may be more numerous just prior to the onset of true sleep and immediately upon arousal. Attacks may occur occasionally in closely-spaced series but as a rule with not more than three or four massive jerks in a short period. In other instances seizures tend to occur at various intervals almost continuously throughout the day.

Buchanan,[2] Yannet,[8], and Lennox and Davis[6] have pointed out that massive myoclonic seizures occur almost entirely within the first two years of life. A striking characteristic of myoclonic seizures observed in the group of patients in our series was the early age at onset. Eighty-five per cent of the patients had the first attack before the age of 6 months. In fact, the most common age of onset was the neonatal period. In all instances, however, seizures began before the age of 1 year. This is in marked contrast to idiopathic epilepsy in which the age of onset is generally between 3 and 12 years. Since initially myoclonic seizures may be minimal in their intensity and atypical in character, they are mistaken not infrequently for Moro reflexes, nervous twitches, or mani-

festations of hyperirritability and hypertonicity. In such instances their exact identity is not recognized until the seizures subsequently increase in frequency and intensity, and failure in motor and mental development ensues.

In accord with the suggestions of Buchanan and others, our group of patients also offers evidence that the type of seizure described occurs in infants and small children in whom there is defective cerebral development. Although the extent of the central nervous system defect may not be appreciated within the first few months of life, subsequently objective, clinical, and neurologic signs of motor and mental retardation appear. In fact, all of the patients in our group exhibited varying degrees of brain damage. Approximately one-half of the group developed additional neurologic signs of cerebral palsy, particularly of the spastic type. Pneumoencephalography, when performed, usually revealed evidence of cerebral atrophy.

Approximately 70 per cent of the patients studied gave a history suggestive of early, severe insult to the central nervous system, either at birth or during early infancy. In such instances histories revealed prolonged delay in respiration after delivery, a difficult delivery with signs of severe asphyxia, unusual lethargy, feeble nursing, unwarranted fever, or known acquired infections of the central nervous system. In 2 instances a history of rubella occurring within early months of pregnancy of the mother was elicited. It is possible that a number of these infants presumed to have had so-called "birth accidents" actually had prenatal congenital defects of the nervous system, which would account for their profound difficulties after birth.

RELATIONSHIP TO OTHER SEIZURES

Less than one-half of the patients with massive myoclonic seizures in our series had other seizure phenomena. In the early age group, particularly within the first three months of life, such seizures were the sole type of attack observed in more than 75 per cent of the patients. On the basis of the evidence accumulated thus far, the occurrence of myoclonic seizures during early infancy seems to be an early diagnostic sign of severe cerebral damage.

Of the patients with other types of convulsions, two-thirds subsequently developed astastic or akinetic seizures, whereas 50 per cent had one or more grand mal attacks. Less than one-third had similar convulsive disorders before the appearance of myoclonic seizures.

ELECTROENCEPHALOGRAPHIC FINDINGS

Although the electroencephalographic findings are subject to wide variation, the basic feature seems to be a diffuse spike and wave pattern; the latter, however, is variable in rate and configuration. In idiopathic convulsive states the electroencephalogram may be abnormal only intermittently, the epileptiform discharges being fairly stereotyped in their configuration. This is in contrast to the electroencephalogram in massive myoclonic seizures, which shows almost continuous abnormal patterns with repeated larval epileptiform discharges of irregular and inconstant character. In addition a large percentage of cases show some electrographic lateralization with reference to the temporal leads, with one side revealing multiple sharp and spike-like discharges which do not bear a simple relationship to the diffuse-wave pattern. Thus, the electroencephalogram in patients with massive myoclonic seizures may be characterized by both rapid and slow spike-wave discharges, and not by the slow spike-wave pattern alone, as described by Lennox.[6]

TREATMENT

In contrast to the favorable therapeutic results obtained in idiopathic epileptic states, attempts to obtain effective control of convulsive seizures in the brain-damaged patient are often unsatisfactory. Different anticonvulsant drugs have been used for varying periods of time in order to reduce or stop the occurrence of massive myoclonic seizures effectively. Thus far, drug combinations of Gemonil and Mebaral, or Mebaral and Dilantin Sodium have offered the most promising encouragement. These combinations have been more effective than phenobarbital, Phenurone, Mesantoin, and Thiantoin. No beneficial results were noted with Tridione or Paradione. The use in addition of glutamic acid and Dexedrine Sulfate provided apparently no beneficial response, insofar as the seizures and mental-motor status were concerned.

DISCUSSION

The occurrence of myoclonic phenomena in cerebral convulsive disorders is an interesting but poorly understood manifestation. Although its character is variable, in essence it is an objective symptom consisting of an abrupt unsustained jerk of an individual muscle or major muscle group. In the type of myoclonic attack described here, there appears to be a sudden massive neuronal activation of the major flexor muscles of the trunk and extremities. This is in marked contrast to the myoclonic patterns seen in other conditions. Spontaneous jerky muscle movements occur in the healthy newborn and small infant. However, they are considered normal, and may reflect

the result of periodic neuronal discharges in an immature cerebral cortex.[2] Similarly, quick spasmodic contractions of focal muscle groups not unlike the tics, habit spasms, or sudden jerks of an extremity during early sleep appear in otherwise healthy persons.[1]

Likewise, it is necessary to differentiate massive myoclonic or "jack-knife" seizures from the momentary myoclonic jerks of the arms which occur as part of the "triad" of symptoms in true idiopathic petit mal.[5, 6] In this condition, sometimes referred to as "motor petit mal," the electroencephalogram shows a typically rapid "spike and wave" pattern which is coincident with the brief myoclonic shock. In such instances, however, minor myoclonic jerks of petit mal epilepsy occur in persons beyond the age of infancy and in patients in whom there is usually no associated brain damage.

In contrast to these divergent myoclonic states, it is necessary also to differentiate the myoclonic states seen in myoclonus epilepsy. The latter is rather uncommon but is exceedingly serious. It is seen in older children and adults and is associated with progressive central nervous system degeneration, major motor convulsions, and increasingly severe mental deterioration. Not uncommonly there is a strong familial background and an absence of preceding insult to the central nervous system. Clinical entities, possibly variants of each other, characterized by this syndrome of progressive myoclonus epilepsy have been described—the paramyoclonus multiplex of Friedreich, intermittent myoclonia of Lundborg, and progressive familial myoclonia of Unverricht.[3, 4]

SUMMARY

Clinical and electroencephalographic features of massive myoclonic seizures are described. They appear to comprise a seizure syndrome which differs from the myoclonic states of other convulsive disorders in time of onset, response to drug therapy, and prognosis.

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ABSTRACT OF DISCUSSION

DR. JOHN L. OTTO, Galveston: I would like to congratulate the author in bringing to our attention a condition, the significance of which is frequently overlooked. Those of us who deal with epilepsy daily have long been acquainted with the so-called "jack-knife" seizure of infancy. We have usually thought of it as a forerunner of grand mal seizures and have not always felt that the patient necessarily would be retarded. I would like to ask the author what percentage of his series were mentally defective and also how many patients eventually developed grand mal or psychomotor seizures?

I would like to emphasize the necessity of not confusing this symptom with petit mal epilepsy because, as pointed out, the treatment is entirely different.

There are two other conditions that must be differentiated, namely, spinal myoclonic seizures occurring with irritation of the anterior horn cells of the spinal cord and the so-called brain stem or cerebellar fit.

Alcohol Retained in Body Determines Intoxication

The amount of alcohol which a person's body fails to oxidize or eliminate determines the degree of his intoxication rather than the amount of alcohol consumed by the drinker, a physician stated in *The Journal of the American Medical Association* recently.

The consultant pointed out that it is the unburned alcohol in the body that causes intoxication and that the only reliable way to determine a person's state of intoxication is by testing the percentage of alcohol in his blood, breath, or urine.

"The average 150 pound man oxidizes and eliminates about seven to ten cubic centimeters of absolute alcohol per hour. If he would space his drinks, he could drink a pint of 100 proof liquor in 24 hours without showing physical or chemical signs of intoxication," the consultant stated.

The presence of food in the stomach delays absorption of the alcohol, and dilution of alcohol in the stomach also is a factor to be considered.

The report pointed out that an average person who consumes five drinks, each containing one-half ounce of absolute alcohol, in three hours consumes a total of two and one-half ounces, an amount which could cause a maximal blood alcohol of about 2.12 per cent by weight if no oxidation took place. However, in the three hours one ounce of alcohol would be oxidized, reducing the blood alcohol to a maximum of 0.08 per cent.

Oral Hygiene in Children

Advice on oral hygiene is a responsibility which physicians in pediatric practice should not overlook, Dr. John A. Bigler of Northwestern University, Chicago, points out in a recent issue of the *Journal of the Missouri Medical Association*. The physician should make certain that the parents of his young patients are given advice on caries prevention, tooth abnormalities and diseases, malocclusion, and dental repair. Children should be sent to the dentist soon after their second birthday. A well-balanced diet for the development of good teeth should be followed. Brushing of the teeth should be started before the child is 18 months old.

Scope of Radiation Therapy in Pediatrics

MARTIN SCHNEIDER,* M.D., F.A.C.R., Galveston, Texas

IN the past decade, interesting and progressive changes have occurred in the treatment of many benign and malignant conditions affecting infants and children. These changes in turn have modified the selection of cases for radiation therapy, so that its application has increased in some diseases and has decreased in others. This presentation is a brief survey of 243 cases that received radiation therapy at the University of Texas Medical Branch Hospitals between May, 1942 and March, 1952. These children represent 11 per cent of the patients treated by the Department of Radiology during the same period.

The benign and malignant disorders are summarized separately and, to note better the changes that seem to have occurred, two periods of approximately five years each are separated in tables 1 and 2. Coloring all these figures is the matter of selection of patients, of course.

BENIGN CONDITIONS

Nasopharyngeal Lymphoid Hyperplasia and Otitis Media.—If preventive medicine is the ultimate goal of our efforts as physicians, then surely we have cause for gratification in treating patients with nasopharyngeal lymphoid hyperplasia and otitis media. I have chosen to include two conditions in this subdivision because they are generally inseparable in infants and younger children, although it is the hearing problem which usually brings the older child to a physician. Actually, of course, the problems of infection and of postinfection deafness are separate in time only. Infections of the upper respiratory tract in infants and children stimulate the enlargement of lymphoid aggregates about the eustachian orifice and canal and even in the middle ear. The infections, as well as the obstructing lymphoid follicles, favor a cicatricial reaction that may finally fix the auditory ossicles and seal off the auditory tubes; there is, of course, the additional important hazard of acute and chronic mastoiditis secondary to otitis media.

In the child with infection of the upper respiratory tract the appearance of otitis media and a bulging tympanic membrane is a warning signal to the physician that auditory tube obstruction exists. If nasal decongestants and antibiotic drugs do not promptly overcome the infection and lymphoid obstruction, radiation therapy should be used. Its effectiveness is so well attested in a voluminous literature that practically all physicians are aware of it today.

Read before the Section on Radiology, Texas Medical Association, Annual Session, Dallas, May 7, 1952.

**Professor of Radiology, University of Texas Medical Branch, Radiologist, Medical Branch Hospitals.*

Many of the older children with postinfection deafness display nasopharyngeal lymphoid hyperplasia and even a chronic edema of the mucous membrane in the roof and lateral walls of the nasopharynx. Deafness for the school-age child is a profound misfortune with its attendant educational, social, and psychologic disturbances. Chronic eustachian tube obstructions of this type can be avoided by effective resolution of the etiologic lymphoid hyperplasia and inflammatory infiltrations early in life. Once the obstruction is established, the problem is more difficult but still productive of improved hearing in many such cases, if therapy is carried out with an adequately fractionated low-dosage technique. The establishment of a hearing clinic by the University of Texas Medical Branch Department of Otolaryngology in 1946 provided good objective follow-up study of efforts with the aid of pre-treatment and post-treatment audiometry. An example of one of the good results in overcoming a chronic hearing loss is afforded by the audiometric records reproduced in figure 1.

TABLE 1.—*Benign Disorders Treated by Irradiation at the University of Texas Medical Branch Between May, 1942, and March, 1952.*

Benign Disorders	May, 1942-Dec., 1946	Jan., 1947-Mar., 1952	Total
Nasopharyngeal lymphoid hyperplasia; otitis media	8	48	56
Keloids	8	10	18
Hemangioma	0	11	11
Pyogenic Inflammations	8	3	11
Tuberculous lymphadenitis	3	9	12
Thymus	7	2	9
Epiphyseal arrest	13	3	16
Tinia capitis	0	9	9
Asthma	3	2	5
Eosinophilic granuloma; Schüller-Christian disease	3	3	6
"Hygroma" (lipoma)	1	0	1
Plantar wart	2	0	2
Papillomas, eyelids	0	2	2
Total	56	102	158

TABLE 2.—*Malignant Disorders Treated by Irradiation at the University of Texas Medical Branch Between May, 1942, and March, 1952.*

Malignant Disorders	May, 1942-Dec., 1946	Jan., 1947-Mar., 1952	Total
Brain tumors	10	17	27
Subtentorial	6	7	13
Supratentorial	4	10	14
Lymphoblastoma	4	11	15
Hodgkins' disease	2	5	7
Others	2	6	8
Leukemia (including leukosarcoma)	2	7	9
Renal embryoma (Wilms's tumor)	4	6	10
Neuroblastoma	1	5	6
Other soft tissue sarcomas	4	6	10
Osteogenic sarcoma	0	3	3
Carcinoma of adrenal (with liver metastases)	0	1	1
Total	25	56	81

The matter of employing the transnasal radium monel-metal applicator or the roentgen ray in treating these conditions has been long resolved for most radiologists in favor of roentgen therapy. The popularity of the radium applicator was enhanced among orolaryngologists by its use in the Air Forces during World War II for aero-otitis media, despite the differences in pathogenesis and pathologic manifestations between aero-otitis and the otitis of acute infection of the upper respiratory tract. The radium applicator produces excessively high dosage at its surface and a rapid fall-off within a few millimeters. The possibility is serious that late sequelae such as atrophic pharyngitis or worse may occur. With external roentgen therapy, dosage to the entire auditory tube from middle ear to nasopharyngeal wall is uniform within satisfactory limits when small, bilateral fields are used.[5] A satisfactory technique has been the use of 200 kilovolts, half value layer of 1 mm. of copper, 50 cm. target-skin distance, 25 to 50 cm.^{2} field bilaterally, 50 to 100 r (air) to each field at semiweekly intervals four to six times. The selection of field size must be individualized. On occasion, a chronic panpharyngitis may require larger fields with smaller air doses, and concomitant tracheobronchitis will be benefited by the addition of a thoracic field.

Keloids.—The recent and the old keloid require differences in treatment technique. The result in the recent keloid is uniformly good with but little treatment by roentgen ray or radium. The old keloid may require a fractionated dosage schedule over a period of time that varies with the individual problem, or excision followed by radiation therapy as a prophylactic measure. Present attempts to employ streptokinase-streptodornase with hyaluronidase by injection into the young keloid have had only irregular success. Radiation therapy remains the treatment of choice for these lesions.

Hemangioma.—Most hemangiomas involute spontaneously. Unfortunately, we cannot know which will later grow to be disfiguring and possibly dangerous lesions, as some do. Watchful observation by the parent, family doctor, or pediatrician should bring hemangiomas for treatment at any early evidence of growth. Injection of sclerosing solutions, surface applications of "dry ice," and surgical excision are methods frequently used with success. In employing radiation therapy, I have preferred to use radium in plaques or in platinum tubes as indicated, by surface application; it is easier to maintain accuracy in babies in this manner than with roentgen-ray therapy. The latter has been more desirable, however, for more extensive hemangiomas. The one principle to be maintained at all costs is that of minimal treatment, for the two processes of thrombosis and fibrosis, leading to obliteration of the lesion, need only to be initiated, not forced. Given time and patience, those processes will obliterate hemangioma with less trauma, better cosmetic result, and fewer visits to the office than other modes of treatment. Examples of this conservative approach follow:

R. B., aged 8 months, had a lesion illustrated before and after treatment in figure 2a and b. The lesion was on the proximal half of the calf of this baby's leg. His father, then a resident in orthopedics at our hospital, was conscious of the proximity of the superior

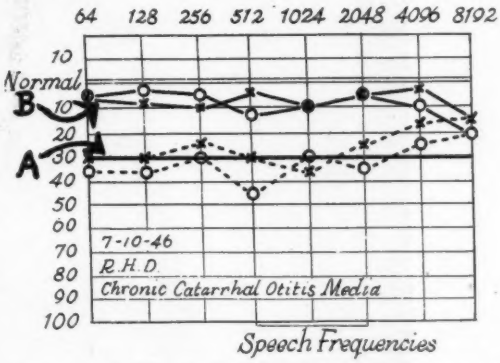

FIG. 1. Composite audiometric record before (*A*) and after (*B*) roentgen therapy for nasopharyngeal lymphoid hyperplasia and otitis media in a 10-year old patient. The pretreatment loss of from 30 to 40 decibels in the speech-frequency range is a serious handicap for the school child. In this case, sulkiness, disinterest, and apparent mental retardation had characterized his school and home behavior. After treatment the patient became cooperative and eager to learn.

tibial and fibular epiphyses. After seeking advice from a dermatologist, a plastic surgeon, and us, he brought the baby back for radium therapy. Blanching and partial obliteration of the lesion is seen in figure 2b, eight months after therapy administered by surface application; since then, further improvement with good cosmetic result has occurred.

An unusual post-traumatic telangiectasis of the cheek (fig. 2c and d) was treated by radium plaque (half-strength, 10 mg.) with threshold-erythema doses; slow involution has led to a satisfactory cosmetic result. This lesion appeared after the patient had fallen and abraded her cheek on a gravel walk.

Suppurative Inflammations and Tuberculous Cervical Lymphadenitis.—The excellent improvement in control of suppurative and tuberculous infections by antibiotic agents and chemotherapeutic agents is reflected in a decreasing need for radiotherapy. When indicated, the resolution of both types of infection by small dose, fractionated roentgen-ray therapy is too well known to bear elaboration here. The nonspecific activity of ionizing radiations on the inflammatory bed explains the great diversity of inflammations for which they are useful; lack of undesirable side effects

when anti-inflammatory doses are employed is an advantage not to be overlooked.[12] There is little doubt, however, that the continuing development of chemical agents with broader spectra is bringing all but occasional infections under control early; we may hope that this will prove as true for tuberculosis as for pyogenic disease.

Enlarged Thymus.—The evidence against irradiation of the enlarged but asymptomatic thymus is convincing: (1) the "normal" thymus has not been defined; (2) a large thymus may be found in the chests of many infants merely incidentally; (3) apparent "buckling" of the trachea in the presence of a large thymus shadow can be demonstrated on the lateral chest roentgenogram of many infants, particularly in the phase of expiration; even if it persists in inspiration, significant impairment of the airway may not be present in this group.

For the infants with stridor, radiation therapy is helpful when the thymus is enlarged, but it should be reserved for those in whom a thorough examination discloses no other cause, such as laryngeal anomalies or papillomas, disease or injury of the central nervous system, laryngeal edema or granulations accompanying infections, or vascular ring. Judson[7] found other causes for so-called thymic stridor in 65 per cent of symptomatic patients with enlargement of the thymus. Perry, Motsay, and Littleton[9] in 2,000 infants found not one case in which apparent enlargement of the thymus was the etiologic factor in the presenting symptoms; Portmann[10] noted the relief of symptoms sometimes without reduction in size of the

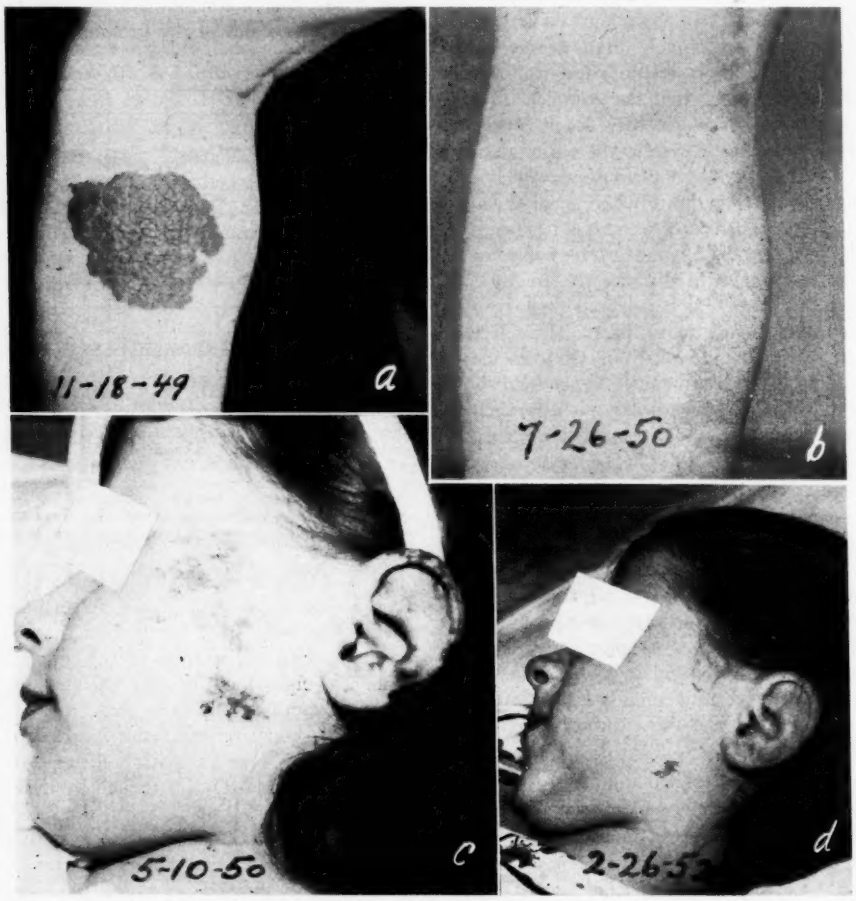

FIG. 2a. Photograph of a slowly growing hemangioma on the calf of the leg of an 8 month old boy.

b. Eight months after application of radium therapy, the lesion pictured in *a* has flattened and been obliterated.

c. Photograph of a disfiguring, post-traumatic telangiectasis of the left cheek and left ear of an 8 year old girl.

d. In the girl shown in *c*, the skin was soft and of normal texture and a tiny patch of telangiectasis remained over the angle of the jaw twenty-one months after therapy by radium plaque application. No further treatment was deemed necessary.

thymus, and conversely, one may effect a shrinkage of the thymus without relieving stridor.

Our pediatrics service examines many babies with dyspnea and stridor; it seems to me significant that so few need be referred for radiation therapy (table 1.) It may well be that tracheobronchitis or paratracheal lymphadenitis are the causes of some of the stridors that we do relieve; if so, they should be reported as such, rather than as examples of thymic enlargement.

Epiphyseal Arrest.—In the past few years, orthopedic surgeons at the Medical Branch and many others have been investigating the method of stapling the epiphyses about the knee joint as a means of achieving epiphyseal arrest. There is no doubt that radiation therapy can prevent growth permanently at these epiphyses, as Spangler has shown.[14]

The principle advantage claimed for surgical stapling is that it suppresses epiphyseal growth and that epiphyses may resume their activity if the staples are removed. Possible overcorrection of leg length thus may be prevented as the child grows.[3] Final evaluation of these methods must await the test of time.

Tinea Capitis.—The 9 cases of tinea capitis that have been treated on our service have done well, with the usual epilation and regrowth of hair. The tech-

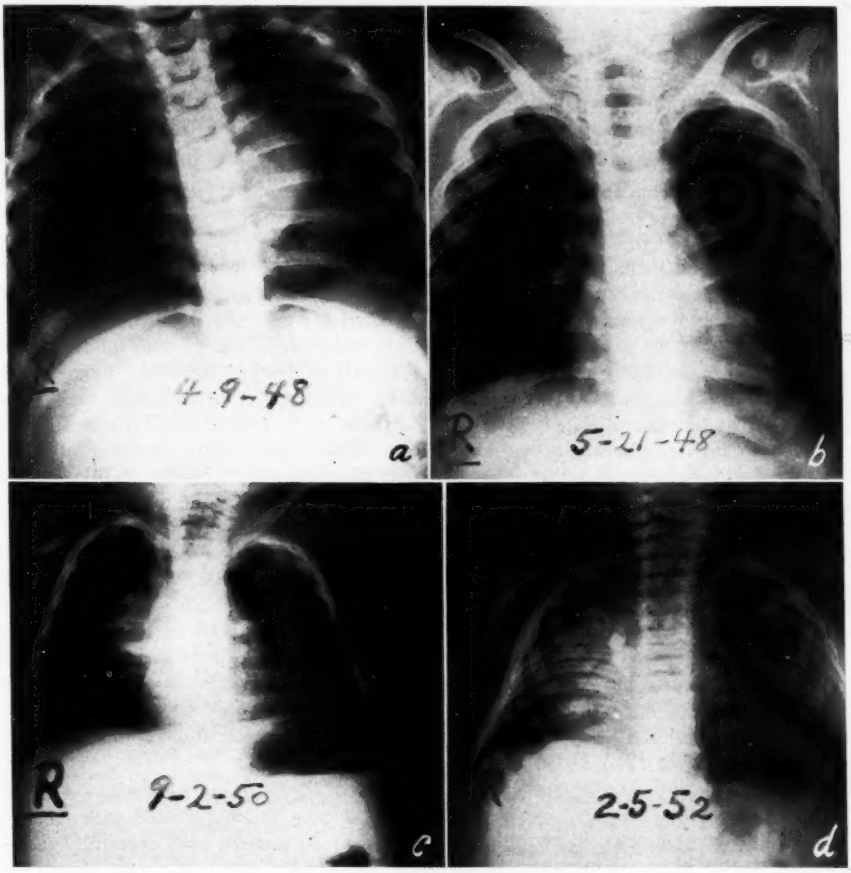

FIG. 3a. A Bucky roentgenogram demonstrates the sharply defined paravertebral mass behind the heart of a 23 months old boy. There was no evidence of rib or vertebral erosion and pathologic diagnosis was "ganglioneuroblastoma."

b. A chest roentgenogram made three years after surgical removal and postoperative roentgen therapy in the patient in *a*. There is no evidence of tumor; the chest appears normal.

c. Roentgenogram of a large soft tissue mass in the posteromedial portion of the right hemithorax of a 5 months old boy. The tissue mass invades adjacent ribs and vertebrae and lies opposite the fourth to tenth thoracic vertebrae. Pathologic diagnosis was "neuroblastoma."

d. Chest roentgenogram of the patient in *c* taken seventeen months after surgical biopsy with resection of a posterior segment of the right sixth rib and roentgen-ray therapy. Some contraction of the right hemithorax with retraction of the mediastinum and diaphragm is apparent. The resected and diseased portion of the sixth rib has regenerated and the adjacent ribs and vertebrae have healed. At the center of the original tumor site is a small residual calcification which has decreased in size.

nique employed has been the five-point method of Kienbock. In the past two years, influenced by experiences elsewhere, the dermatology service has been using chemical means of therapy although treatment time is more prolonged than with roentgen-ray epilation. The medical and economic assessment of the methods is yet to be evaluated fully. Roentgen epilation appears the treatment of choice at least for Endothrix infection.

Asthma.—The term "asthma" may disguise a variety of ills, but if it is admitted that the condition is often a somatic response to psychic conflicts or fears, there is still a place for roentgen therapy in the management of the acute attack, particularly if it has resisted other treatment. Small doses are in order, of 75 r to 100 r (air) to anterior and posterior midthoracic fields alternately, for one to four times, guided by the response of the patient. Deep therapy factors with half value layer of 1 mm. copper are satisfactory. Of course, the underlying allergen and/or psychogenic difficulty must be found if a cure is to be achieved.

Eosinophilic Granuloma and Schüller-Christian Disease.—Because eosinophilic granuloma and Schüller-Christian disease may represent different stages of a single disorder, with similar bone lesions and similar radiosensitivity, I consider them together. The response of the osseous lesions in these diseases is excellent and reliable; they require only moderate doses in appropriate fractions, to totals of 800 r to 1,200 r (air).

The granulomatous infiltrates are suppressed promptly, and bone healing will occur. As a note of caution, it should be remembered that eosinophilic granuloma may be multiple, in as many as 30 per cent of cases.

Miscellaneous Conditions.—The 1 case of Hygroma was recorded in our records in 1943, but it was not improved by radiation therapy. The tumor later removed proved to be a lipoma.

Plantar wart was treated in 2 cases; in my opinion, radiation therapy has no place in management of these lesions in childhood, though it is effective in adults. The difference, of course, is due to the closely underlying metatarsal epiphyses in children.

Papilloma of the eyelids in 2 cases was treated recently by one of our staff, large doses were employed; the result thus far seems satisfactory. If these lesions are similar to papilloma of the larynx, a trial of estrogenic hormone applied topically may be fruitful, as Broyles reported for laryngeal papilloma in 5 cases.[2]

MALIGNANT DISEASES

Malignancies in childhood comprise an increasing percentage of pediatric diseases. This is in part due to the decline in infectious diseases and infant diarrhea, with increased numbers of children living to develop neoplasms, as pointed out by Farber.[4] Increasing awareness of the frequency of neoplasms in this age group is another factor in bringing more cases to definitive therapy by radiation, surgical, and/or chemical means. Broadly speaking, children's neoplasms tend to be more primitive in cell-type and to grow more rapidly than those in adults. In at least some types of malignancy, there has been a justified shift from an attitude of little hope to one of cautious optimism coupled with a bolder attack on the problem.

Central Nervous System.—No children with primary tumors of the spinal cord came to our department during this period. Of the brain lesions, we have treated almost equal numbers of supratentorial and subtentorial ones (table 2). Briefly, the pathologic types were much the same in frequency as expected, with medulloblastoma and astrocytoma (5 cerebral, 3 cerebellar) most common. Six of these 27 children are now alive twelve to sixty-eight months after treatment; 5 were lost to follow-up after known survivals of five to forty-four months; and 2 have been discharged from treatment only recently. One of these has a cerebral glioblastoma and is not likely to survive long. The astrocytomas display the best over-all prognosis; they are radioresponsive, rather than radiosensitive as the medulloblastomas are; they remain localized. Gratifying palliation may be aided by radiation therapy in those cases not completely extirpated by the surgeon. With the possible exception of medulloblastomas, all these tumors should have surgical removal wholly or in part, when accessible; shunt operations are indicated in midline obstructing lesions. It is my impression that these procedures help in reconstitution of well-being in the children we treat during the interval between surgery and radiation therapy.

Lymphoblastoma and Leukemia.—From the standpoint of cure, our experience with lymphoblastoma and leukemia has not been cheerful. Palliation, however, is initially excellent almost always in lymphosarcoma, Hodgkin's disease, and the chronic leukemias. The longest known survival is forty-nine months, and the patient was lost to follow-up thereafter. The use of Aminopterin in the acute leukemias seems to result in some increase in survival time and is the treatment of choice for them at present. Involvement of the hematopoietic tissues is a frequent finding in lymphosarcoma, so that the differential diagnosis of lymphatic leukemia may be difficult. Total body irradiation by roentgen-ray or radioactive phosphorus has been as effective as more prolonged local treatment in the chronic leukemias. It may be supplemented by irradiation of the enlarged spleen. Aside

from the question of increased survival time, the well-being of most of these patients has been obviously improved by radiation therapy and, in some of our cases, by folic acid antagonists.

Embryoma of the Kidney (Wilms's Tumor).—There is no question about the need for nephrectomy and postoperative irradiation in Wilms's tumors, but the controversy over the need for preoperative irradiation is not yet settled conclusively. In favor of preoperative irradiation is the shrinkage of most of these tumors, rendering less difficult the surgical approach to the renal pedicle, and destruction of those cells which might be expected to cause fatal metastases. Opponents of this procedure cite the delay before nephrectomy with danger of metastasis during that period and a questionable increase in danger of metastasis due to tumor resolution during treatment. Ladd and White[8] and Gross and Neuhauser[6] have stated a preference for postoperative irradiation only. Their statistics with an increase of survival rates from 32.2 per cent to 47.3 per cent when postoperative irradiation was added to nephrectomy, have not been exceeded significantly by any published reports. These authors prefer to handle their cases of Wilms's tumor as emergencies and to use the transabdominal surgical approach; they begin postoperative roentgen therapy immediately after surgery. Others prefer to individualize in each case their decisions on the employment of preoperative irradiation and on the surgical approach. This largely resolves itself into an evaluation based on the size of the tumor and the location of the renal pedicle. Our Medical Branch urologists are now interested in exploring the possibilities of preoperative irradiation, since almost all of the embryomas we have seen have been enormous tumors, even in comparison with the usual large size they attain before coming to definitive treatment. The results reported by the Boston group and by Rusche,[11] by Silver,[13] and by others indicate that this disease is curable now in about half the cases, a significant improvement over the outlook previously.

Dosage in the renal fossa postoperatively should be in the range of 4,000 r to 4,500 r in from twenty-five to thirty days. This is not difficult to achieve in children because of their size, and is well tolerated with large fields and moderate daily increments of dosage. Roentgen therapy should be directed to the abdomen and employed for the chest only if metastases there are demonstrable.

Neuroblastoma.—Neuroblastoma appears usually in infancy from any neural tissue but commonly from the medulla of the adrenal gland or the thoracic sympathetic trunk. With this group, too, prognosis must be reevaluated in terms of the survivals reported in the literature. It may be cured (1) by radiation therapy and/or surgery, (2) by spontaneous maturation into benign ganglioneuroma, and (3) perhaps by resolution after hemorrhage into the tumor. It is a radiosensitive tumor. Beck and Howard[1] reported a six-year cure after roentgen therapy and found that of 475 cases reported in the literature, 10 per cent were said to be cured. But Wittenborg's analysis[15] of 73 cases revealed 2 patients well at twelve and sixteen years after biopsy only (they were among 8 not treated by any method); 7 three-year survivals of 12 cases surgically treated; and 6 three-year survivals of 11 cases treated by surgery and postoperative roentgen therapy (including 4 to 6 cases in whom excision of tumor was incomplete). Most encouraging was the survival of 6 patients with abdominal tumor and liver metastasis only. These figures are weighed considerably by selection, since the small localized tumors were treated surgically and the others by roentgen therapy with or without prior surgery.

Of our 6 cases, 2 occurred in the thorax, and both patients are alive and well; 1 of them four years after surgical removal (which appeared complete) followed by radiation therapy (fig. 3a and b).

The other survivor has lived twenty months and was treated by roentgen therapy (3,868 r in twenty-five days) after biopsy. The malignancy in this case was rapidly growing and had invaded the posterior thoracic wall, two ribs at least, and the adjacent vertebrae, in the right hemithorax (fig. 3c). The patient was paraplegic. The tumor regressed during the course of treatment, and since then a return of sensation in the lower torso and legs has occurred, but with little or no return of motor function there. Pulmonary scarring is confined to the right side, over which an anterior and a posterior field were used. The boy is now a healthy looking child of 25 months, free of symptoms of active malignancy. It is noteworthy that even the calcific nubbin at the site of tumor has decreased in size progressively (fig. 3d).

I cite these survivors as reason for the hope with which physicians should approach the treatment plan for these neoplasms; by no means need they be considered suitable only for palliation.

Miscellaneous Neoplasms.—Among the miscellaneous sarcomas are fibrosarcoma of the pelvis, anaplastic sarcoma of the retroperitoneal region and pelvis, hemangiosarcoma, and unclassified sarcoma of the maxilla. The cytologically-primitive sarcomas may yield fruitful results if treated adequately; 2 recent patients, 1 with a lesion in the maxilla and 1 in the pelvis, have shown a complete regression of tumor and excellent general health following roentgen therapy alone. A similar good palliation, but without total tumor regression, has occurred following roentgen therapy for a carcinoma of the adrenal with extensive liver metastasis.

Osteogenic Sarcoma.—Three cases of osteogenic sarcoma have been treated intensively as an investigative attempt to improve survivals where the femur was the site of disease. Roentgen therapy was employed preoperatively starting immediately after biopsy with the child still under anesthesia and with tourniquet compression maintained. Maximum tumor doses of 5,500 r to 7,660 r were administered in one week, and amputation was performed immediately afterward. No dramatic survivals can be reported, unfortunately: 2 patients are dead; 1 is living but his case has been followed for only twelve months.

A beneficial influence on the well-being of several children occurred during the administration of cortisone while they were receiving radiation therapy for malignancies. Probably this is the known general effect on the patient due to the additional support rendered against the stresses accompanying extensive malignant disease. Antineoplastic activity of cortisone may occur too, since it is anti-anabolic, particularly for actively-growing cells.

SUMMARY

The distribution of conditions among 243 infants and children treated with radiation therapy from May, 1942 to March, 1952, is presented.

Advantages and limitations of this modality for several benign and malignant disorders are discussed briefly.

The changing outlook and selection of cases in the past ten years is apparent for several of these disorders.

It is suggested that the prognosis for some malignancies of children is better than generally realized, so that persistent attempts at cure are well justified.

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ABSTRACT OF DISCUSSION

DR. GENE D'AVERSA, Longview: Dr. Schneider has covered the field of pediatric radiation therapy so well that it would be difficult to add anything. In a short paper he has amassed a wealth of facts drawn from a large hospital practice. His concise review of indications, value, and shortcomings of this modality could easily serve as a guide to any radiotherapist.

In office practice radiologists do not frequently treat malignancies in infants and children, and that aspect of radiation therapy is usually reserved for the hospital radiologist. Consequently, I shall confine my remarks to some of the more common conditions radiologists treat in their offices.

The problem of the enlarged thymus consists mainly of evaluation. I have always thought that too many infants received treatment merely because of the discovery of a prominent or enlarged thymic shadow on the chest roentgenogram. The conscientious therapist will strive to assure himself that the patient's symptoms are due to the enlarged gland and not caused by some other condition. After that, the treatment is simple and efficacious with little or no reaction. One or two light roentgen-ray treatments spaced about five to seven days apart are all that are required. If subsequent chest roentgenograms do not show marked shrinkage of the thymus, the diagnosis of benign thymic enlargement is open to question.

Keloids respond well to roentgen rays or radium, depending on the preference and experience of the radiologist. Old, fibrous keloids are best excised and irradiated soon after surgery.

I have had good results treating hemangiomas with contact radium tubes. Applications are light and after three or four treatments, spaced about three to four weeks apart, observation of the lesion for six to eight weeks frequently reveals that satisfactory regression is occurring. If added therapy is indicated, a wider spacing of applications with observation periods are advisable. Hemangiomas do not require much treatment, if attended to early in life. No standard number of treatments can be given, as each case must be considered an individual problem. I prefer radium to roentgen rays because of the facility of keeping the irradiation source directly over the lesion and the greater margin of safety when treating over growing epiphyses.

Properly applied, the Kienbock-Adamson method of epilation is still the favored treatment for tinia capitis. However, it is a delicate and painstaking procedure requiring accurate positioning and maintenance of the patient, along with unchanged distance of target from scalp and strict adherence to a narrow range of dosage. The latter is a source of possible error that is easy to overlook. The roentgen-ray output of an x-ray machine is subject to slight change over a period of use and, especially in epilation therapy, it is advisable to calibrate the machine immediately before the treatment. This will avoid error in estimated dosage.

In nasopharyngeal lymphoid hyperplasia, I have used roentgen-ray treatment exclusively, although reports in the literature have been voluminous on the use of the transnasal monel metal radium applicator. Almost all patients coming to my office ask me to explain how the roentgen rays and radium work in the nasopharynx, and why I prefer the

former. I am sure that the radium applicator, properly used, has a high percentage of efficacy. However, I like to feel that I am irradiating tissues that are frequently involved and are several millimeters away from the eustachian tube orifice. Using essentially the technique outlined by Dr. Schneider, I have had gratifying results. The occasional case of pharyngitis sicca is mild and easily cared for.

The fact that 11 per cent of radiation therapy in a ten year period at the University of Texas Medical Branch was administered to children and infants is indicative of the important part radiation therapy has come to play in pediatrics through liaison between general practitioner, pediatrician, and radiologist. Wider dissemination of knowledge in this field is essential to improvement of this phase of medical practice.

NEWS

COMING MEETINGS AND CLINICS

Texas Medical Association, Houston, April 28-29, 1953. Dr. T. C. Terrell, Fort Worth, Pres.; Mr. N. C. Forrester, 700 Guadalupe St., Austin, Executive Secy.

American Medical Association, Denver, Dec. 2-5, 1952. Dr. Louis H. Bauer, Hempstead, N. Y., Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy. Dr. Walter S. Burrage, Milwaukee, Pres.; Mr. James O. Kelley, 208 E. Wisconsin Ave., Milwaukee 2, Executive Secy.

American Academy of Dermatology and Syphilology. Dr. Donald M. Pillsbury, Philadelphia, Pres.; Dr. John E. Rauschkolb, 25 Prospect Ave., N. W., Cleveland 15, Secy.

American Academy of General Practice, St. Louis, March 23-26, 1953. Dr. R. B. Robins, Camden, Ark., Pres.; Mr. Mac F. Cahal, 406 W. 34th St., Kansas City 2, Executive Secy.

American Academy of Neurological Surgery, New York, October, 1952. Dr. Henry G. Schwartz, St. Louis, Pres.; Dr. Theodore B. Rasmussen, 950 E. 59th St., Chicago 37, Secy.

American Academy of Obstetrics and Gynecology, Chicago, Dec. 15-17, 1952. Dr. Carl P. Huber, Indianapolis, Pres.; Dr. Ralph A. Reis, 116 S. Michigan Ave., Chicago 3, Secy.

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 12-17, 1952. Dr. J. Milton Robb, Detroit, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics, Chicago, Oct. 20-23, 1952. Dr. W. W. Quillian, Miami 34, Pres.; Dr. E. H. Christopherson, 610 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery, San Francisco, March 27-30, 1953. Dr. Robert M. Janes, Toronto, Canada, Pres.; Dr. Paul C. Samson, 2938 McClure St., Oakland 9, Calif., Secy.

American Association of Genito-Urinary Surgeons, Hot Springs, Va., May 6-8, 1953. Dr. A. J. Scholl, Los Angeles, Pres.; Dr. Norris J. Heckel, 122 S. Michigan Ave., Chicago 3, Secy.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Hot Springs, Va., Sept. 4-6, 1952. Dr. Leroy A. Calkins, Kansas City, Pres.; Dr. William F. Mengert, 2211 Oak Lawn Ave., Dallas, Secy.

American Cancer Society. Dr. Guy Aud, Louisville, Ky., Pres.; Mr. M. R. Runyon, 47 Beaver St., New York, Exec. Vice-Pres.

American College of Allergists. Dr. J. Warrick Thomas, Richmond, Va., Pres.; Dr. Fred W. Wittich, 423 La Salle Medical Bldg., Minneapolis 2, Secy.

American College of Chest Physicians, New York, May 28-31, 1953. Dr. Andrew L. Banyai, Milwaukee, Pres.; Mr. Murray Kornfield, 112 E. Chestnut St., Chicago 11, Exec. Secy.

American College of Physicians, Atlantic City, April 13-17, 1953. Dr. T. Grier Miller, Philadelphia, Pres.; Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology, Chicago, February, 1953. Dr. John S. Bouslog, Denver, Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American College of Surgeons, New York, Sept. 22-26, 1952. Dr. Alton Ochsner, New Orleans, Pres.; Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secy.

American Congress of Physical Medicine. Dr. Robert L. Bennett, Warm Springs, Ga., Pres.; Dr. Frances Baker, 1 Tilton Ave., San Mateo, Calif., Secy.

American Dermatological Association, Lake Placid, N. Y., June 9-13, 1953. Dr. Earl D. Osborne, Buffalo, Pres.; Dr. L. A. Brunsting, 102 2nd Ave., S. W., Rochester, Minn., Secy.

American Gastro-Enterological Association, Atlantic City, May 1-2, 1953. Dr. Albert M. Snell, Palo Alto, Calif., Pres.; Dr. H. Marvin Pollard, 1313 E. Ann St., Ann Arbor, Mich., Secy.

American Gynecological Society. Dr. William P. Healy, New York, Pres.; Dr. John I. Brewer, 104 S. Michigan Ave., Chicago, Secy.

American Hospital Association, Philadelphia, Sept. 15-18, 1952. Dr. Anthony J. J. Rourke, San Francisco, Pres.; Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secy.

American Laryngological, Rhinological, and Otological Society, New Orleans, April 28-30, 1953. Dr. Francis E. Le Jeune, New Orleans, Pres.; Dr. C. S. Nash, 277 Alexander St., Rochester 7, N. Y., Secy.

American Neurological Association, Atlantic City, June 15-17, 1953. Dr. Hans H. Reese, Madison, Wis., Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society, Hot Springs, Va., May 28-30, 1953. Dr. Conrad Berens, New York, Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York 19, Secy.

American Orthopedic Association. Dr. Fremont Chandler, Chicago, Pres.; Dr. C. Leslie Mitchell, Henry Ford Hospital, Detroit 2, Secy.

American Pediatric Society, Atlantic City, May 6-8, 1953. Dr. Irvine McQuarrie, Minneapolis, Pres.; Dr. Aims McGuinness, 237 Medical Laboratory, University of Pennsylvania, Philadelphia 46, Secy.

American Proctologic Society, Boston, June 10-13, 1953. Dr. Newton D. Smith, Rochester, Minn., Pres.; Dr. Stuart T. Ross, 131 Fulton Ave., Hempstead, N. Y., Secy.

American Psychiatric Association, Los Angeles, May 4-9, 1953. Dr. D. Ewen Cameron, Montreal, Canada, Pres.; Dr. R. Finley Gayle, 6300 Three Chopt Rd., Richmond 21, Va., Secy.

American Public Health Association, Cleveland, Oct. 20-24, 1952. Dr. Gaylord W. Anderson, Minneapolis, Pres.; Dr. R. W. Atwater, 1790 Broadway, New York 19, Exec. Secy.

American Society of Anesthesiologists, Philadelphia, Nov. 11-14, 1952. Dr. C. Walter Metz, Denver, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists, Chicago, Oct. 13-18, 1952. Dr. Israel Davidsohn, Chicago, Pres.; Dr. Clyde G. Culbertson, Indiana University School of Medicine, Indianapolis, Secy.

American Surgical Association, Los Angeles, April 1-3, 1953. Dr. Robert S. Dinsmore, Cleveland, Pres.; Dr. Nathan Womack, Chapel Hill, N. C., Secy.

American Urological Association, St. Louis, May 11-14, 1953. Dr. George F. Cahill, New York, Pres.; Dr. C. H. DeT. Shivers, 121 S. Illinois Ave., Atlantic City, N. J., Secy.

Association of American Physicians and Surgeons, Denver, Oct. 2-4, 1952. Dr. Denton Kerr, Houston, Pres.; Mr. Harry E. Northam, 360 N. Michigan Ave., Chicago 1, Executive Secy.

International College of Surgeons, U. S. Chapter, Chicago, Sept. 2-5, 1952; Tri-State Assembly, Dallas, Feb. 6-7, 1953. Dr. H. W. Meyerding, Rochester, Minn., Pres.; Dr. Arnold S. Jackson, 1516 Lake Shore Drive, Chicago, Secy.

National Tuberculosis Association, Los Angeles, May 18-22, 1953. Dr. Sidney J. Shipman, San Francisco, Pres.; Mr. Kemp D. Battle, 1790 Broadway, New York 19, Secy.

Radiological Society of North America, Cincinnati, Dec. 7-12, 1952. Dr. Joseph C. Bell, Louisville, Ky., Pres.; Dr. D. S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

Southern Medical Association, Miami, Nov. 10-13, 1952. Dr. R. J. Wilkinson, Huntington, W. Va., Pres.; Mr. C. P. Loranz, 1020 Empire Bldg., Birmingham 3, Ala., Secy.

Southern Psychiatric Association. Dr. R. Burke Suitt, Durham, N. C., Pres.; Dr. Newdigate M. Owensby, Medical Arts Bldg., Atlanta, Ga., Secy.

Southern Surgical Association, Hollywood, Fla., Dec. 9-11, 1952. Dr. I. Mims Gage, New Orleans, Pres.; Dr. John C. Burch, 2112 West End Ave., Nashville 5, Tenn., Secy.

Southwest Allergy Forum, Kansas City, Mo., 1953. Dr. Orval R. Withers, Kansas City, Mo., Pres.; Dr. James Holman, Medical Arts Bldg., Dallas, Secy.

Southwest Regional Cancer Conference, Fort Worth, Sept. 24-25, 1952. Secy., 209 Medical Arts Bldg., Fort Worth.

Southwestern Medical Association, Albuquerque, N. Mex., Oct. 30-Nov. 1, 1952. Dr. James Walsh, Douglas, Ariz., Pres.; Dr. W. W. Schuessler, 1415 First National Bank Bldg., El Paso, Secy.

Southwestern Surgical Congress, Dallas, Oct. 20-22, 1952. Dr. Michael E. DeBakey, Houston, Pres.; Dr. C. R. Rountree, 1227 Classen, Oklahoma City 3, Secy.

Tri-State Medical Assembly, Texarkana, Oct. 2-3, 1952, Dr. Frank G. Thibault, El Dorado, Ark., Pres.; Dr. Albert M. Hand, Le Bonheur Children's Hospital, Memphis 3, Tenn., Secy.

United States-Mexico Border Public Health Association, Ciudad Juarez, Chihuahua, Mexico, 1953. Dr. Salvador Molina Velez, Nuevo Leon, Mexico, Pres.; Dr. Sidney B. Clark, 314 U. S. Court House, El Paso, Secy.

STATE

Private Clinics and Hospitals Association of Texas, Austin, Oct. 24-25, 1952. Dr. Harvey Renger, Hallettsville, Pres.; Dr. Neil D. Buie, Marlin, Secy.

Texas Academy of General Practice, San Antonio, Sept. 15-16, 1952. Dr. Van D. Goodall, Clifton, Pres.; Dr. B. H. Bayer, 104 E. Twentieth St., Houston, Secy.

Texas Academy of Internal Medicine, Dallas, Dec. 6-7, 1952. Dr. W. C. Dine, Amarillo, Pres.; Dr. John S. Chapman, 3810 Swiss Ave., Dallas, Secy. Meetings restricted to members.

Texas Air-Medics Association, Houston, April 27, 1953. Dr. Claire F. Miller, Waco, Pres.; Dr. J. S. Minnett, 2512 Welborn, Dallas, Secy.

Texas Association of Blood Banks, Galveston, Dec. 5-6, 1952. Dr. E. E. Muirhead, Dallas, Pres.; Miss Marjorie Saunders, 3500 Gaston Avenue, Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Fort Worth, 1953. Dr. D. D. Wall, San Angelo, Pres.; Dr. Carey Hiett, 815 Fifth Ave., Fort Worth, Secy.

Texas Chapter, American College of Chest Physicians. Dr. Robert B. Morrison, Austin, Pres.; Dr. Samuel Topperman, East Texas State Sanatorium, Tyler, Secy.

Texas Club of Internists. Dr. Herbert Hill, San Antonio, Pres.; Dr. Hatch W. Cummings, Jr., 203 Hermann Professional Bldg., Houston, Secy.

Texas Dermatological Society, Waco, Fall, 1952. Dr. C. H. McCuistion, Austin, Pres.; Dr. Thomas L. Shields, 1216 Pennsylvania Ave., Fort Worth, Secy.

Texas Diabetes Association. Dr. E. K. Doak, Houston, Pres.; Dr. Ivan Mayfield, 1318 Main, Lubbock, Secy.

Texas Division, American Cancer Society. Mr. Frank C. Smith, Houston, Pres.; Mr. J. Louis Neff, 1609 Colorado, Austin, Executive Director.

Texas Heart Association, Houston, April 27, 1953. Dr. J. C. Crager, Beaumont, Pres.; Miss Roberta Miller, 411 Reserve Loan Life Bldg., Dallas, Executive Secy.

Texas Hospital Association, Galveston, May 12-14, 1953. Mr. Carroll H. McCray, Tyler, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association. Dr. Don Morris, Dallas, Pres.; Dr. John L. Otto, John Sealy Hospital, Galveston, Secy.

Texas Orthopedic Association, Houston, April 27, 1953. Dr. Felix Butte, Dallas, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, Dallas, Oct. 17-18, 1952. Dr. C. S. E. Touzel, Fort Worth, Pres.; Dr. M. C. Carlisle, 1410 Austin Ave., Waco, Secy.

Texas Public Health Association, Galveston, Feb. 15-18, 1953. Mr. H. E. Drumwright, Dallas, Pres.; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Executive Secy.

Texas Radiological Society, San Antonio, Jan. 23-24, 1953. Dr. Robert D. Moreton, Fort Worth, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association. Dr. Everett Lewis, Houston, Pres.; Dr. W. D. Marrs, 306 Broadway, Fort Worth, Secy.

Texas Rheumatism Association, Dallas, December 5, 1952. Dr. Robert H. Mitchell, Fort Worth, Pres.; Dr. Charles H. Cornwell, Marlin, Secy.

Texas Society for Mental Health, Austin, March 2-3, 1953. Mr. William Grant, Jr., Baytown, Pres.; Mrs. Elizabeth F. Gardner, 2504 Jarratt Ave., Austin 21, Executive Secy.

Texas Society of Anesthesiologists. Dr. John F. Winter, San Antonio, Pres.; Dr. C. R. Allen, John Sealy Hospital, Galveston, Secy.

Texas Society of Gastroenterologists and Proctologists. Dr. Jack Kerr, Dallas, Pres.; Dr. C. P. Hardwicke, 120 W. Seventh St., Austin, Secy.

Texas Society of Ophthalmology and Otolaryngology, Houston, Dec. 5-6, 1952. Dr. J. Charles Dickson, Houston, Pres.; Dr. Lyle Hooker, 627 Esperson Bldg., Houston, Secy.

Texas Society of Pathologists, Houston, Jan. 25, 1953. Dr. Charles T. Ashworth, Fort Worth, Pres.; Dr. Lloyd R. Hershberger, Shannon Memorial Hospital, San Angelo, Secy.

Texas Surgical Society, Austin, Oct. 6-7, 1952. Dr. Robert M. Moore, Galveston, Pres.; Dr. Albert W. Hartman, 414 Navarro St., San Antonio 5, Secy.

Texas Tuberculosis Association, Mineral Wells, April 9-11, 1953. Dr. David McCullough, Kerrville, Pres.; Miss Pansy Nichols, 208 E. Ninth, Austin, Executive Secy.

Texas Urological Society. Dr. R. E. Cone, Galveston, Pres.; Dr. Roy M. Morgan, Jr., Hermann Hospital, Houston, Secy.

DISTRICT

First District Society, El Paso, Feb. 13-14, 1953. Dr. Jim Camp, Pecos, Pres.; Dr. H. D. Garrett, First National Bldg., El Paso, Secy.

Second District Society, Big Spring, April 5, 1953. Dr. John Hogan, Big Spring, Pres.; Dr. Arch Carson, Box 111, Big Spring, Secy.

Third District Society, Lubbock, April 14-15, 1953. Dr. James A. Odom, Memphis, Pres.; Dr. James T. Hall, 1626 Fifteenth Street, Lubbock, Secy.

Fourth District Society, San Angelo, Oct. 8, 1952. Dr. B. A. Hallum, Brady, Pres.; Dr. Lloyd R. Hershberger, San Angelo, Secy.

Fifth and Sixth Districts Society, Corpus Christi, July 10-11, 1953. Dr. Y. C. Smith, Sr., Corpus Christi, Pres.; Dr. Robert J. Sigler, 1126 Third Street, Corpus Christi, Secy.

Seventh District Society, Austin. Dr. George W. Tipton, Austin, Pres.; Dr. D. B. Faubion, 1403-C Guadalupe, Austin, Secy.

Eighth District Medical Society, Victoria, Oct. 1, 1952. Dr. Leonard Johnson, El Campo, Pres.; Dr. Robert Casey, Texas City, Secy.

Ninth District Society, Baytown, April 1, 1953. Dr. Otto F. Schoenvogel, Brenham, Pres.; Dr. Lyman C. Blair, 1212 Rothwell, Houston, Secy.

Tenth District Medical Society, Orange, Oct. 11, 1952. Dr. Peyton C. Clements, Lufkin, Pres.; Dr. Edmund D. Jones, 2575 South, Beaumont, Secy.

Eleventh District Society, Jacksonville, Fall, 1952. Dr. Roscoe Moore, Mineola, Pres.; Dr. Marlin T. Braswell, Henderson, Secy.

Twelfth District Society. Dr. J. B. Brown, Temple, Pres.; Dr. Neil D. Buie, Marlin, Secy.

Thirteenth District Society, Wichita Falls. Dr. R. E. Cowan, Graham, Pres.; Dr. Robert D. Moreton, 815 Medical Arts Bldg., Fort Worth, Secy.

Fourteenth District Society, Gainesville, June 9 ,1953. Dr. W. P. Philips, Greenville, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.

Fifteenth District Society, Dr. C. B. Reed, Clarksville, Pres.; Dr. William E. Jones, 619 Main, Texarkana.

CLINICS

Dallas Southern Clinical Society, Dallas, March 16-19, 1953. Miss Betty Elmer, Medical Arts Bldg., Dallas 1, Executive Secy.

Central Texas Spring Clinic, Waco. Dr. Walter B. King, 2320 Columbus Ave., Waco, Secy.

International Medical Assembly of Southwest Texas, San Antonio, Jan. 27-29, 1953. Dr. John M. Smith, Jr., 205 Camden St., San Antonio, Secy.

New Orleans Graduate Medical Assembly, March 2-5, 1953. Dr. Woodard D. Beacham. Room 103, 1430 Tulane Ave., New Orleans 12, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls, Sept. 17, 1952. Dr. E. Aubrey Cox, Hamilton Bldg., Wichita Falls, Chairman.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 27-30, 1952. Mrs. Muriel R. Waller, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Postgraduate Medical Assembly of South Texas, Houston, 1953. Dr. C. A. Dwyer, Secy., 229 Medical Arts Bldg., Houston.

BASIC SCIENCES EXAMINATION

The Texas State Board of Examiners in the Basic Sciences announces that the next examination has been set for October 17-18 and will be given in Austin and Galveston, according to the applicant's choice. Application blanks and information may be obtained by writing to the board, 407 Perry-Brooks Building, Austin. To be eligible, applications must be completed one week before the examination date.

Classification of Priority 3 Doctors

State and local advisory committees are currently being requested to furnish recommendation as to the essentiality of priority 3 physicians and dentists. This is a direct result of Operations Bulletin 75, issued by National Selective Service Headquarters on July 18, 1952, requesting local Selective Service boards to classify all priority 3 physicians and dentists of Special Registration 1, authorized by Public Law 779.

Priority 3 doctors are those who are nonveterans of World War II and who paid for their own professional educations. It is anticipated that the Department of Defense will begin calling priority 3 dentists by the end of this year and priority 3 physicians by next March or April.

Doctors in this category are asked to bear in mind that priority 3 special registrants and reserve officers will be called according to age, with the youngest being called first. There are more doctors in this group than in priority 1 or 2, and this category will continue to increase in size with each medical and dental graduating class. A small number of the current enrollment in medical and dental schools are students who served in World War II and who will automatically enter priority 4 upon completion of their professional educations. The majority of these students, however, have not served any active military duty, are paying for their professional training, and will enter priority 3 upon graduation.

Priority 3 doctors are currently being classified by local boards on the basis of file data at hand. This means that a large majority of priority 3 special registrants will be classified 1-A. Registrants will have ten days in which to appeal classification to local boards. If a doctor, therefore, feels that his services are essential to the health and welfare of the community in which he practices, he should contact his local advisory committee, asking that he be declared essential by that group. The local advisory committee then will furnish recommendation to the local board concerned.

Many priority 3 doctor-registrants may have good reason to believe that they are not physically qualified for active military service. These doctors should present the facts regarding their physical status to their respective local boards. Local boards will eventually order all registrants in the priority 3 group for physical examination, but in the interim, the time period for appealing classification may have elapsed. The State Advisory Committee is suggesting to these persons that they allow the time period to elapse, provided that they have valid reason for believing that they will be found physically disqualified. After physical examination, the registrants will be notified by the local boards as to whether or not they are physically acceptable. If an individual registrant is found physically acceptable and wishes to appeal his 1-A classification, he should present himself to his local advisory committee. If the local advisory committee finds this doctor essential, a letter of recommendation should be forwarded to the local board concerned, requesting reconsideration of the doctor's status and reclassification. Local Selective Service boards may reopen a case for reconsideration whenever there is written evidence that an individual registrant is entitled to a different classification, provided that the registrant has not been ordered up for induction. If the evidence presented to the local board is sufficient to warrant reclassification, such action may be taken by the board.

After an order for induction has been issued, a local board may not reopen the classification or consider a case anew except by direction from the State Director for Selective Service. Neither can a local board postpone an induction except when there is an extreme emergency over which the registrant has had no control. Therefore, the State Advisory Committee, in such case, would make representation to the State Director and explain to him the changed circumstances which necessitate the declaration of essentiality. In the event that the State Director does not see fit to follow the recommendation of the State Advisory Committee, the case will be referred to the National Advisory Committee for consideration and such action as it deems appropriate with National Selective Service Headquarters.

Public Health Reserve Officers

Because the last Congress did not extend the military status of Public Health Service officers, all P.H.S. reserve physicians, dentists and veterinarians less than 51 years of age must register with Selective Service local boards under the doctor-draft law. This ruling does not apply to officers of the regular corps. There is no change in status, however. They are not subject to induction; they receive credit for service the same as the armed forces; they continue to receive the $100 per month special pay; and they get credit for all service after September 16, 1940.

REGISTRATION OF NEW GRADUATES

Reports indicate that some recent graduates in dentistry and medicine failed to register as special registrants as is required under Public Law 779, the Selective Service System reports. The registration order requires all male persons (with the exception of members of the reserve components of the armed forces, members of the armed forces on active duty, and certain aliens) to register within five days after they receive a degree of bachelor of medicine, doctor of medicine, doctor of dental surgery, doctor of dental medicine, doctor of veterinary surgery, or doctor of veterinary medicine.

Although persons receiving such degrees after January 15, 1951, may already be registered under the Selective Service Act, they also are required to present themselves for registration under Public Law 779. Doctors may register at any local board of the Selective Service System.

Southwestern Medical School

New faculty appointments at Southwestern Medical School of the University of Texas, Dallas, for 1952-1953, effective September 1, include those of Dr. John Chapman, assistant dean of graduate and postgraduate education and professor of medicine; Dr. Donald W. Seldin, professor of medicine and acting chairman of the Department of Medicine; and Dr. Virginia C. Doggett, assistant professor of physiology.

Grants awarded are as follows:

From the Ophthalmic Research Foundation, $1,000 for research in ophthalmology, under supervision of the head of that division in the Department of Surgery.

From the National Fund for Medical Education, $15,112 in support of the instructional program.

From the United States Public Health Service, $25,000 for cancer training to Dr. A. B. Small, director of the cancer program; $14,000 for cardiovascular training to Dr. Howard Heyer, director of the cardiovascular training program; $8,694 for graduate training in psychiatry and $14,958 for undergraduate training in psychiatry to Dr. Don Morris, director of the mental health program; $11,680 for research on "The Effects on the Volume of Blood in the Lungs and Respiration of Hemorrhage, Intravenous and Intra-Arterial Infusions of Whole Blood, Saline, and Dextrose Solutions in Normal, Sodium Depleted, and Traumatized Dogs" to Dr. Ben J. Wilson and Allen F. Reid, Ph. D.; $10,692 for research on "The Effects of Homogenous Renal Transplants and Other Procedures on Hypertension, Cardiovascular Lesions, and Anemia Following Bilater-

al Nephrectomy" to Dr. E. E. Muirhead; and $3,000 for research on "Use of Radioactive Diidofluorescein and Iodinated Human Serum Albumin in the Study of Vascular, Degenerative, and Neoplastic Diseases of the Central Nervous System" to Dr. Ralph S. Clayton.

NATIONAL MEETINGS BECKON PHYSICIANS

Several national meetings of interest to physicians scheduled to be held during October and November include:

The American Medical Writers' Association, October 1, St. Louis. All persons concerned with medical writing are invited to attend the one-day meeting which is being held in conjunction with the annual meeting October 1-3 of the Mississippi Valley Medical Society. Details may be obtained from Dr. Harold Swanberg, secretary, W.C.U. Building, Quincy, Ill.

The National Gastroenterological Association, October 20-22, New York. Following the convention and scientific sessions, the annual course in postgraduate gastroenterology will be conducted in New York by the Association. Further information may be obtained by writing to the Secretary, National Gastroenterological Association, 1819 Broadway, New York 23.

Association of Military Surgeons, November 17-19, Washington, D. C. The Department of Defense has announced that reserve credit points will be given to medical reserve officers of the Army, Navy, and Air Force who attend these meetings. The sessions are recognized as being devoted to subjects having direct military application.

Tri-State Medical Assembly

The Tri-State Medical Assembly will meet October 2-3 in Texarkana. The program for the meeting has been devised to consist of four symposiums as follows:

Hepatitis and Jaundice—Drs. Benjamin Wells, Katharine Dodd, and Anderson Nettleship, University of Arkansas, Little Rock.
Advances in Surgery—Dr. Harwell Wilson, University of Tennessee, Memphis, presiding.
Neurosurgery—Dr. Francis Murphy, Memphis.
Thoracic Surgery—Dr. Duane Carr, Memphis.
Cardiac Surgery—Dr. John W. Duckett, Dallas.
Common Bile Duct Stenosis—Dr. Harwell Wilson, Memphis.
Preparation of the Patient for Surgery—Dr. James D. Hardy, Memphis.
Bleeding from the Female Reproductive Tract—Dr. Henry Turner, University of Tennessee, Memphis, presiding.
Cardiac Management.

Dr. S. R. Halpern, Dallas, will be the principal speaker at an "Allergy Luncheon" on Thursday, October 3.

The meeting will be open to physicians in general; registration fee will be $10. Further information may be secured from Dr. Albert M. Hand, secretary, Le Bonheur Children's Hospital, Memphis, Tenn.

PERSONALS

Drs. Tate Miller, Dallas; *H. Reid Robinson,* Galveston, *Merton Minter,* San Antonio; and *Herbert E. Hipps,* Waco were among those who took part in the formal opening and dedication August 8 of the new 100-bed Navarro County Memorial Hospital, states the Corsicana *Sun.*

Dr. Howard O. Smith, Marlin, superintendent and chief surgeon of the Torbett Clinic and Hospital, has been named a district governor of Rotary International for the year 1952-1953.

Dr. Homer B. Johnson, Midland, has been presented with a certificate of merit by the Lions League of Crippled Children of the Midland Lions Club, reports the Midland *Reporter-Telegram.*

Dr. Paul V. Ledbetter and Mrs. Ledbetter, Houston, planned to tour the east and west coasts of South Africa after Dr. Ledbetter attended a heart meeting in Buenos Aires, according to a news article in the Houston *Press.*

SAN ANTONIO TUMOR SEMINAR

The ninth annual San Antonio Tumor Seminar, sponsored by the San Antonio Society of Pathologists and supported in part by the Texas Division of the American Cancer Society and the College of American Pathologists, will be held November 1 at Brooke Army Hospital, San Antonio. Dr. Lauren V. Ackerman, professor of surgical pathology at Washington University, St. Louis, will be guest conductor of the seminar.

There is no registration fee. Pathologists and others interested in obtaining a box of study slides for the seminar or additional information may address requests to Dr. A. O. Severance, Baptist Memorial Hospital, 205 Camden Street, San Antonio.

MEDICAL ASPECTS OF CIVIL DEFENSE IN BOOKLET

A series of articles on various medical aspects of civil defense published originally in *The Journal of the American Medical Association* has now been reprinted in booklet form by the Council on National Emergency Medical Service of the American Medical Association and may be obtained from the council at 25 cents per single copy or 20 cents per copy in orders of 100 or more.

These articles are written by doctors for doctors. Dr. Ozro T. Woods, Dallas, is author of one paper on "Mental Health and Civil Defense."

TEXAS PEDIATRIC SOCIETY

The Texas Pediatric Society will hold its annual meeting on October 17-18 in Dallas, with seven guest speakers scheduled to appear on the program. The speakers and their subjects will be:

DR. DOROTHY H. ANDERSEN, New York: "Celiac Disease and Starch Intolerance" and "Pathology of Premature and Newborn Infants."

DR. HERBERT C. MILLER, Kansas City: "Pathogenesis and Clinical Features of Pulmonary Hyaline Membranes in Newborn Infants" and "The Use of Tracheotomy, Intermittent Positive Pressure and Heavy Sedation in the Treatment of Children with Respiratory Failure Due to Poliomyelitis."

DR. WALDO E. NELSON, Philadelphia: "The Pediatrician and Cerebral Palsy" and "Errors in Antibiotic Therapy."

DR. GILBERT B. FORBES, Dallas: "The Effect of Age on Disease and Physiological Response."

DR. JOSEPH J. QUILLIGAN, JR., Dallas: "Infectious Mononucleosis."

DR. W. R. HEPNER, Galveston: "Retrolental Fibroplasia."

DR. JOSEPH A. STOOL, Houston: "Recent Trends in Immunization."

HEARING AID AUDIOLOGISTS ORGANIZE

The Society of Hearing Aid Audiologists has been formed recently to satisfy the long-recognized need by the public and medical professions for a responsible reference in selecting competent hearing aid consultants and firms.

An official register of certified hearing aid audiologists and firms which sell, fit, and service hearing aids will be published annually.

Applicants seeking admission to the society will be required to pass written and oral examinations to determine competency in skills related to fitting and servicing hearing aids.

LIBRARY SECTION

PACKAGE SERVICE

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Request for packages should be addressed "Library, Texas Medical Association, 1801 Lamar Boulevard, Austin, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Packages are allowed to remain in the hands of the borrower for 14 days.

ACCESSIONS

The following additions were made to the Library during August:

Reprints received, 920.

Journals received, 271.

Books received, 10.

Cardiac Therapy, Stewart, Paul B. Hoeber, Inc., Medical Department of Harper and Brothers, New York.

Applied Physiology, ed. 9, Wright, Geoffrey Cumberlege, Oxford University Press, London.

Textbook of Gynecology, ed. 4, Novak and Novak, Williams and Wilkins Company, Baltimore.

Pharmacology in Clinical Practice, Beckman, W. B. Saunders Company, Philadelphia.

Sex After Forty, Lewis and Gilmore, Medical Research Press, New York.

Diabetic Glomerulosclerosis, Specific Renal Disease of Diabetes Mellitus, Rifkin and others, American Lecture Series: *Battle Casualties, Incidence, Mortality, and Logistic Considerations,* Beebe and DeBakey; *Metabolic Bone Disease, Rare Manifestations,* Snapper, American Lecture Series; *Disorders in Perception,* Bender, American Lecture Series; *Sterility, Its Cause and Its Treatment,* Rommer, Charles C. Thomas, Springfield, Ill.

SUMMARY OF SERVICE

Local users, 58. Borrowers by mail, 36.
Local packages, 21. Packages mailed, 40.
Films loaned, 36.

MOTION PICTURE FILM LIBRARY

Motion picture films on medical subjects, 16 mm., both silent and sound, some in color, and suitable for either medical or lay audiences, are available for loan to county medical societies, hospital staffs, or individual physicians, on request. Borrowers will be required to pay only the cost of shipment of the films, by express, with insurance, and for any damage to films in the hands of the borrower.

Request for films should be addressed to "Motion Picture Film Library, Texas Medical Association, 1801 Lamar Boulevard, Austin, Texas." A list of available films, with descriptions, will be furnished on request.

The following motion pictures were loaned by the Library during the month of August:

Accent on Use (National Foundation for Infantile Paralysis)—Dr. C. G. Goddard, Bastrop.

Aids In Muscle Training (American Medical Association)—Dr. C. G. Goddard, Bastrop.

Anesthesia, Regional (Winthrop-Stearns)—Dr. C. G. Goddard, Bastrop.

Anesthesia with Vinethene (Merck and Company)—Major Clinic Hospital, Nocona.

As Others See Us (American Hospital Association)—Major Clinic Hospital, Nocona.

Breech Extraction with Forceps (Mead Johnson)—Seagraves Clinic Hospital, Seagraves.

Cesarean Section, Low Cervical (Mead Johnson)—Stephenville Hospital and Clinic, Stephenville.

Chest Disease, Surgery in (British Information Services)—Alpha Mu Alpha, North Texas State College, Denton.

Cholecystectomy (Mead Johnson)—Seagraves Clinic Hospital, Seagraves.

Diagnosis of Poliomyelitis (National Foundation for Infantile Paralysis)—Seagraves Clinic Hospital, Seagraves, and Dr. C. G. Goddard, Bastrop.

The Doctor Speaks His Mind (American Cancer Society)—Tom Green County Tuberculosis Association, San Angelo.

Dysmenorrhea, Primary (G. D. Searle and Company)—Dr. W. S. Parks, Midland.

Functional Anatomy of the Hand (National Foundation for Infantile Paralysis)—Seagraves Clinic Hospital, Seagraves, and Launey-Altick Clinic, Dallas.

Human Fertility, Studies in (Ortho Pharmaceutical)—Launey-Altick Clinic, Dallas, and Dr. W. S. Parks, Midland.

Human Sterility (Winthrop-Stearns)—Launey-Altick Clinic, Dallas.

Hypodermic Syringes and Needles: Their Care and Function (Becton, Dickinson and Company)—Stephenville Hospital and Clinic, Stephenville.

Hysterectomy (Mead Johnson)—Major Clinic Hospital, Nocona.

Immunization Against Infectious Diseases (Lederle Laboratories)—Lamar State College of Technology, Beaumont.

In Daily Battle (National Foundation for Infantile Paralysis)—Junior Chamber of Commerce, Pampa; Lions Club, Pampa; and Public Showing, Pampa.

Infantile Paralysis, Your Fight Against (National Foundation for Infantile Paralysis)—Madonna Hospital Staff, Denison.

Life Begins Again (British Information Services)—Top-O-Texas Retail Druggist Association, Pampa.

Normal Delivery (Mead Johnson)—Stephenville Hospital and Clinic, Stephenville.

Polio, Diagnosis and Management (British Information Services)—Madonna Hospital Saff, Denison.

Pyloric Stenosis, Congenital, Surgical Treatment for (Dr. Philip Thorek)—Dr. C. G. Goddard, Bastrop.

A Question in Time (American Cancer Society)—Rotary Club, Rusk, and Lions Club, Rusk.

Skin Grafting of Extensive Burns (Eaton Laboratories)—Dr. C. G. Goddard, Bastrop.

Spontaneous Delivery (Mead Johnson)—Stephenville Hospital and Clinic, Stephenville.

Underwater Therapy (American Medical Association)—Dr. C. G. Goddard, Bastrop.

Varicose Veins and Their Complications (Becton, Dickinson and Company)—Launey-Altick Clinic, Dallas.

BOOK NOTICES

The Battle of Mental Health

JAMES CLARK MOLONEY, M. D., *Birmingham, Mich. Fabrikoid, 105 pages. $3.50. New York, Philosophical Library, 1952.*

[1]Diagnostic Bacteriology

ISABELLE GILBERT SCHAUB, A. B., *Technical Director, Clinical Bacteriology Laboratories, The Johns Hopkins Hospital; and* M. KATHLEEN FOLEY, M. A., *Instructor in Bacteriology, Department of Biological Sciences, College of Notre Dame of Maryland. Fourth edition. Cloth, 341 pages. $4.50. St. Louis, C. V. Mosby Company, 1952.*

In preparing this newest edition, the authors have made extensive revisions and added much new material. An introductory account of bacteriologic methods has been included and methods for the determination of the sensitivity of bacteria to antibiotics are described. Written originally as a manual for the use of the working technician in the laboratory, the book in its present expanded form is presented as a complete and up-to-date textbook of diagnostic bacteriology. It is offered for use in liberal arts colleges and universities, in undergraduate courses in medical bacteriology, as well as in specialized training schools for laboratory technicians, and as a guide and reference for the practicing bacteriologist.

This volume will undoubtedly find a ready welcome, although it falls somewhat short of satisfying all its potentialities. For the beginning technician, the book may well seem somewhat formidable. In changing its character to that of a textbook, it probably has lost some of its original value as a practical guide in the laboratory itself. While academically sound, the procedures outlined for identification of microorganisms often seem somewhat elaborate and remote from everyday practices.

The clinical interest and orientation exhibited by technologists in many good hospital laboratories seems not to be reflected in this text. For example, the index contains no reference to food poisoning, chancroid, or meningitis. To find information about the causative organism of epidemic meningitis, one must know that it is named *Neisseria meningitidis.* The reader may learn the tabulated characteristics of the meningococcus on page 218, what the colonies look like on page 140, how the organisms look in spinal fluid smears on page 78, how they can be isolated from the throat on page 67, how they can be identified on page 217, and finally, how they can be serologically grouped on page 265. Nowhere is there any indication that cases of acute meningococcal septicemia may present an emergency requiring immediate action, nor are there any suggestions elsewhere in the text for handling hurry-up work—what laboratory people call "stat" bacteriology. The fungous diseases are covered in helpful fashion, but the book is incomplete in failing to mention syphilis or leptospirosis, amebiasis, malaria, or other protozoal infections. There are many useful tables but no illustrations.

It is doubtful whether the text is adequate for the public health laboratory worker. As a source of well-documented information, the book fills a need in diagnostic laboratories and should be a valuable help in the training of technologists in bacteriologic procedures. However, for the well-rounded education of such a technologist, it needs to be supplemented by the study of other texts and manuals.

[2]Surgery of Peripheral Nerves

EMIL SELETZ, M. D., F.A.C.S., F.I.C.S., *Assistant Clinical Professor of Neurological Surgery, University of Southern California School of Medicine; Associate Senior Attending Neurosurgeon, Cedars of Lebanon Hospital, Los Angeles. First edition. Cloth, 181 pages. $10.75. Springfield, Ill., Charles C. Thomas, 1951.*

The author has prepared the best atlas of the surgical anatomy of peripheral nerve injuries, including illustrations of the disability resulting from the major nerve injuries, and the anatomic basis for such disability that is available at the present time. Although some types of incisions used for exposure of the major peripheral nerves are illustrated and brief statements concerning technique are made, this book is in no sense a textbook of peripheral nerve surgery. There is no section on results of nerve suture or neurolysis, nor is any discussion included on selection of cases for surgery or on sizes of defects that can be overcome. No mention is made of criteria used for evaluation of results of nerve suture or neurolysis.

The author emphasizes the necessity of absolutely avoiding skin incisions which cross the cubital and popliteal spaces and the wrist in a longitudinal direction, and advocates a Z-type incision. Experiences in neurosurgical centers in World War II do not entirely substantiate this view, as actually relatively few cases show any serious scar contraction as a result of longitudinal incisions per se. Rather, the excessive scarring results from the effects of the wound itself with infection and healing by granulation, or in a relatively few individuals with a pre-existing tendency toward keloid formation. The transverse exposure of the brachial plexus in the axilla as advocated by the author affords much less access to the plexus than a longitudinal exposure so that overcoming a defect of any size would be exceedingly difficult if extensive mobilization of proximal and distal ends were necessary. In the neck the brachial plexus can be completely exposed by means of a V-shaped incision along the posterior border of the sternomastoid muscle and upper border of the clavicle, which cannot be done through an incision similar to that used for scalenotomy. Complete dissection and transposition of the tibial nerve in the popliteal space and leg is an extensive operative procedure and would rarely seem justified to repair either or both of the plantar nerves in the foot, since disability from their complete paralysis is much less than that due to median and ulnar nerve paralysis in the hand.

Transposition of the ulnar nerve anterior to the medial epicondyle of the humerus is preferable to placing the nerve under the site of origin, of the flexor carpi ulnaris, because contraction of scarred muscle fibers will usually interfere with recovery of ulnar function following suture or neurolysis.

A complete permanent paralysis of all components of the brachial plexus seldom occurs so that amputation of the upper limb would rarely be indicated. Tantalum wire (.003 inches) is preferred over silk by many neurosurgeons and any type of sling or retention suture has no place in the repair of peripheral nerves.

[3]Calculation of Industrial Disabilities of the Extremities

CARL O. RICE, M. D., M. S., Ph. D., F.A.C.S., *Clinical Associate Professor of Surgery, University of Minnesota Medical School; Surgical Staff, St. Barnabas Hospital, Minneapolis. First edition. Cloth, 277 pages. $10.50. Springfield, Ill., Charles C. Thomas, 1952.*

The purpose of this monograph is to make a difficult task easy; to assist the inexperienced doctor in making an accurate estimate of a permanent functional disability in an extremity in conformity with the provisions of the Workmen's Compensation Act of his state and based on objective, measurable, demonstrable factors in examination. The purpose is admirable.

The easy solution consists in reducing the estimation of function in any given part to the measurement of the range of useful motion in the joint proximal to that part and com-

[1]*Kenneth L. Burdon, Ph. D., Houston.*
[2]*Claude Pollard, Jr., M. D., Houston.*
[3]*S. Perry Rogers, M. D., El Paso.*

paring it to the range in the contralateral uninjured member. Each joint in each extremity is given a percentage value in its unit, which unit may require further relation to one of the anatomic units defined in compensation laws. Losses of joint ranges are subjected to relatively simple mathematical formulas to arrive at a percentage in terms acceptable to Industrial Commissions. The author insists that in the vast majority of cases his formula produces a percentage disability close to that arrived at by more complex methods, and that factors such as pain, weakness, and incoordination are too intangible to constitute more than a good guess. The final factor which Henry Kessler calls "intuitive correlation" and the late Allen Lazenby called a "hunch" is disallowed.

The book opens with a selected review of the literature available on disability evaluation. It proceeds with methods of measurement, clearly illustrated for each joint, and standards of normal ranges, to both of which exceptions may be taken. Relative values of each joint within its anatomic unit, some of them specifically set forth in the law, are assigned, and anatomic units are correlated with the "industrial members" such as "hand and wrist," "thumb and its metacarpal," and "leg below the hip."

Finally come the methods of calculating the "industrial disability" by simple formula. The relative values assigned each joint frequently add up to more than one hundred per cent. The stiff thumb, sound, sensitive, painless, and fixed in the functional position of opposition is worth only 5 per cent of a thumb, i. e., the disability amounts to 95 per cent of the hand, which is the same as 30 per cent of the upper extremity. No account is taken of the recognized positions of maximum function for joints and the corollary that some parts of the range of motion of each joint are more useful than others. The book is poorly written; grammatical errors are frequent.

Diabetes and Pregnancy

RALPH A. REIS, B. S., M. D., F.A.C.S, *Professor, Obstetrics and Gynecology, Northwestern University Medical School;* EDWIN J. DECOSTA, B. S., M. D., F.A.C.S., *Assistant Professor, Obstetrics and Gynecology, Northwestern University Medical School;* M. DAVID ALLWEISS, B. S., M. D., *Associate in Medicine, Northwestern University Medical School. Fabrikoid, 77 pages. $2.50. Springfield, Ill., Charles C. Thomas, 1952.*

Isotopes in Biochemistry

Ciba Foundation, Edited by G. E. W. WOLSTENHOLME. *Fabrikoid, 288 pages. $5. Philadelphia, The Blakiston Company, 1951.*

[4]Reaction to Injury

WILEY D. FORBUS, M. D., *Professor of Pathology, Duke University. Fabrikoid, 1,110 pages. $20. Baltimore, Williams and Wilkins Company, 1952.*

In volume II of "Reaction to Injury," Dr. Forbus completes a plan that was begun with his first volume. It will be remembered that volume I dealt with the introduction and orienting of material necessary for study of disease and then the resistive reaction of the body to injury. In volume II the study of disease is carried still further and the author considers the submissive reaction of the body to disease and finally the ability of the body to adapt to disease. Thus, if the two volumes are considered as a single unit, disease is classified in three basic reaction types: (1) resistive reaction, (2) submissive reaction, and (3) adaptive reaction.

A review of this work brings forth an immediate feeling of respect and admiration for the author and his painstaking work. Disease is treated as a dynamic process and frequently the general considerations, the pathologic anatomy, the clinical findings, and the pathologic physiology are all discussed with clarity. For the student of disease this is an ideal arrangement.

In addition to the orderly discourse on disease there are other items of great help to the student. Diagrams and charts which help illustrate the material being presented are numerous. Gross pathology is excellently depicted. Some plates show the microscopic changes in a correlated fashion such as an entire plate showing hyaline changes in various organs. Interspersed with the black and white photomicrographs, are excellent color photographs that show typical microscopic findings.

[4]*Lloyd R. Hershberger, M. D., San Angelo.*

Clinical Applications of Recreational Therapy

JOHN EISELE DAVIS, Sc. D., *Chief, Corrective Therapy, Veterans Administration, Washington, D. C. Fabrikoid, 118 pages. $3.75. Springfield, Ill., Charles C. Thomas, 1952. American Lecture Series, No. 123.*

ORGANIZATION SECTION

AMERICAN MEDICAL ASSOCIATION

AID TO DISCHARGED MEDICAL OFFICERS

A new program to acquaint physicians newly discharged from the armed forces with existing opportunities in private practice, industry, hospitals, and medical schools has been set up by the American Medical Association. The plan, inaugurated by the Council on National Emergency Medical Service, incidentally will provide replacements for physicians classified priority 1 under the "Doctor Draft Law" who are now deferred because of essentiality.

The Council will contact Army, Navy, and Air Force physicians before they are discharged to make inquiry of their post-service plans. If the physician has made no plans, he may indicate his preference of location and field of medicine. This information will be sent to state medical societies and to state medical advisory committees to the Selective Service System.

Survey on Research Projects

Questionnaires are being sent out by the Committee on Research of the American Medical Association to determine what medical projects currently are in progress throughout the country. The survey has a three-fold purpose: to establish an up-to-date file of medical research projects; to evaluate the premise that certain fields are suffering from lack of financial support; and to consider the actual contribution of individual scientists in terms of free time and personal expenditure of funds.

TEXAS MEDICAL ASSOCIATION

EXECUTIVE COUNCIL AND COMMITTEE MEETINGS

During the week-end ceremonies for the dedication of the Texas Medical Association Memorial Library and headquarters building scheduled for September 19, 20, and 21

in Austin, the Executive Council and several committees of the Association will meet at the Commodore Perry Hotel, also in Austin.

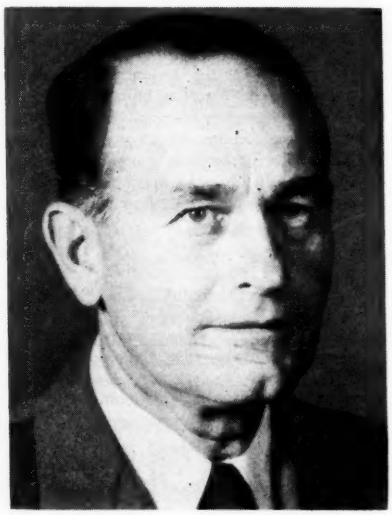
The meeting of the Executive Council is set for Saturday afternoon at 2 o'clock while committee meetings will be held in the morning. All meetings will take place in the hotel so the new Association building can be open for visitors.

Friday meetings include the Committee on Public Relations at 10 a. m., the Committee on Rural Health and Committee on Blood Banks at 2 p. m., and the Committee on Doctor Distribution at 10 p. m.

The Board of Councilors, the Council on Medical Education and Hospitals, the Council on Medical Jurisprudence, and the Telephone Postgraduate Broadcast Committee will meet at 9 a. m., and the Committee on Mental Health at 10 a. m. on Saturday. The State Advisory Committee to Selective Service has scheduled a meeting for Saturday at 8 p. m.

EXECUTIVE SECRETARY NAMED

N. C. Forrester, Austin, who has served as Acting Executive Secretary of the Texas Medical Association for the past year, has been named Executive Secretary of the Association, Dr. Merton M. Minter, San Antonio, chairman of the Board



N. C. FORRESTER

of Trustees, announced recently. Mr. Forrester's appointment became effective August 9. At the same time Dr. Sam N. Key of Austin was named to the Board of Trustees by the President of the Texas Medical Association, Dr. T. C. Terrell of Fort Worth, to fill the vacancy created by the death of Dr. William M. Gambrell of Austin.

The new Executive Secretary has been with the Association since June 15, 1950, serving first as a general administrative assistant. He was appointed Acting Executive Secretary on July 1, 1951, after the resignation of the Executive Secretary, Tod Bates.

Born in Tennessee, Mr. Forrester received his early education in Texas, being graduated from Trent High School. He received his degree in 1925 from Abilene Christian College and spent the next fourteen years teaching school, coaching high school athletics, and serving as principal and later as superintendent of schools at Roby. In 1939 Mr. Forrester resigned his position to enter the insurance business; for nine of his eleven years in this field he was associated with the Blue Cross Hospital Service and Blue Shield Medical Service Plans.

Mr. Forrester married Miss Gene Lawrence of Bartlett on March 15, 1925. The Forresters have resided in Austin since 1940 with their three sons, Robin, Jack, and Tommy.

Dr. Key, named Secretary of the Association in 1951, also has served as chairman of the Association's Building Committee for the past several years. Further information about his activities in this respect and his picture appear in another section of this JOURNAL.

1953 A.A.P.S. Essay Contest

Plans for statewide participation in the seventh annual national essay contest for high school students sponsored by the Association of American Physicians and Surgeons has been announced by the Texas Medical Association. Representatives in Texas on the 1953 contest committee are Dr. Mal Rumph of Fort Worth and Dr. Charles D. Reece of Houston.

As in the past, the contest will be promoted on a state level by county societies and auxiliaries. Mrs. A. O. Severance, San Antonio, has been named state chairman of the Auxiliary committee. A first prize of $1,000 will be awarded for the national winner of the best essay on "Why the Private Practice of Medicine Furnishes This Country with the Finest Medical Care."

Rules for the contest are as follows:

1. Junior and senior high school students, except children of physicians, from all public and parochial schools located in the United States are eligible to enter the contest.
2. Essays must be limited to 1,500 words.
3. Essays should be written on one side of letter size paper (8½ x 11 inches) and if typewritten, double spaced.
4. Essays must be submitted on or before March 1, 1953, to the county society or auxiliary sponsoring the contest or to the state chairmen.
5. The first three prize winning essays from each county medical society will be sent to the state chairmen before March 15.
6. The three top essays in the state will be sent to the A.A.P.S. before April 1 to compete for the national prize.
7. Compositions must be original and should be well documented.
8. Judging will be based solely on knowledge and grasp of the subject supported with documentation and sound logical conclusions.
9. Judges for county, state, and national contests will be a physician, an educator, and another person, all of whom shall have some special knowledge of the subject.

Small packaged libraries with bibliography may be secured free of charge by writing the A.A.P.S., 360 North Michigan Avenue, Chicago 1.

County societies and auxiliaries are urged to work out arrangements with school officials at the beginning of the school year. Additional information may be obtained from Dr. Reece, Dr. Rumph, or Mrs. Severance.

COUNTY SOCIETIES

Bell County Society

August 6, 1952

(Reported by E. D. McKay, Secretary)

Conservative Medical Management of Acute Renal Failure—R. D. Haines, S. B. Lindsey, and V. J. Simmon, Temple.
Discussion—V. J. Simmon, S. B. Lindsey, and R. R. Curtis, Temple.

The Bell County Medical Society met in regular session

August 6 in Temple and heard the scientific program as listed above. W. N. Powell, chairman of the blood bank committee read a report on the findings of the committee regarding the question of participation in the Red Cross Regional Blood Bank program.

Eastland-Callahan-Stephens-Shackelford-Throckmorton Counties Society

July 15, 1952

Ben H. Bradley and Mrs. Bradley, Rising Star, entertained the Eastland-Callahan-Stephens-Shackelford-Throckmorton Counties Medical Society with a barbecue July 15 at their home.

Kerr-Kendall-Gillespie-Bandera Counties Society

July 14, 1952

(Reported by Russell E. Guill, Secretary)

The Repair of Recurrent Hernias by Means of the Curtis Graft—Asher R. McComb, San Antonio.

The Kerr-Kendall-Gillespie-Bandera Counties Medical Society met July 14 at the home of Lorence W. Feller in Fredericksburg. Asher R. McComb, San Antonio, gave an address as indicated.

Dr. Feller served charcoal steaks to the members present. At his request, the money usually paid for the meals was donated by the members to the Lions' Crippled Children's Camp.

Lubbock-Crosby Counties Society

July 1, 1952.

(Reported by Wallace I. Hess, Secretary)

Treatment of Intractable Pain—William H. McKinney, Fort Worth. Discussion—Richard Q. Lewis, Richard K. O'Loughlin, and Harold Warshaw, Lubbock.

Allen T. Stewart, Lubbock, reported for the committee investigating possibilities of establishing a branch of the Postgraduate School of Medicine of the University of Texas in Lubbock, at a meeting in Lubbock on July 1. He reported that the committee had invited the dean of the Postgraduate School of Medicine to visit the area and guide the committee in its actions.

A. G. Barsh was appointed to handle arrangements for the next Third District Medical Society meeting.

William H. Gordon presented the need for additional nursing personnel and a solution sponsored by two local hospitals and the vocational department of Lubbock High School was discussed. The plan is to establish a training school for vocational nurses who, after graduation, would be licensed by the state and work under the supervision of a physician or registered nurse. Folders describing the training and pay of student vocational nurses were distributed. The society voted to approve the plan as it exists.

The above named scientific program was presented.

August 5, 1952

(Reported by Wallace I. Hess, Secretary)

Approximately seventy members and five guests were present at the meeting of the Lubbock-Crosby Counties Medical Society in Lubbock, August 5.

Marie L. Shaw submitted the recommendations of the blood bank committee, particularly emphasizing the work of the Southwest Blood Bank, Inc. The society voted to defer action until all hospital staffs had considered the details.

The group adopted recommendations made by the committee on communicable disease control as offered by R. E. Johnson. Also, William H. Gordon reported that progress was being made on a city-county library in Lubbock. Members discussed the possibility of requesting space in the library to be used as a medical reading room and moved that a committee be appointed to consider this proposal.

A summary of the work of the committee which investigated the possibility of establishing a branch of the Postgraduate School of Medicine of the University of Texas in Lubbock was presented by Allen T. Stewart. He listed three basic requirements necessary before a branch could be established. They are (1) approval of the local medical society, (2) hospitals which can meet requirements for an intern and residence program, and (3) approval of the program by the board of directors of the affiliated hospitals.

J. T. Krueger, Wallace I. Hess, James T. Hall, and Sam Arnett spoke on the advantages of having such a school in Lubbock from the standpoint of general practitioners, specialists, hospital staffs, and teaching staffs. Brandon Hull moved that the society accept the responsibilities of establishing a branch subject to approval by the board of trustees of Lubbock Memorial Hospital, which Dr. Krueger stated was ready to cooperate.

The committee suggested that the names of Drs. Gordon, Stewart, Krueger, and Arnett be submitted to the dean of the Postgraduate School of Medicine of the University of Texas, one of them to serve as director of the Lubbock branch and the remainder to serve in an advisory committee.

Williamson County Society

July 17, 1952

Free Enterprise—T. C. Terrell, Fort Worth.

The summer meeting of the Williamson County Medical Society was held July 17 at the ranch home of Jay J. Johns, Taylor. Barbecue was served to approximately 125 doctors and their wives. T. C. Terrell, President of the Texas Medical Association, gave an address on "Free Enterprise." Two past presidents of the Association, A. A. Ross, Lockhart, and William M. Gambrell, Austin, also spoke to the group. Other speakers were Mrs. William M. Gambrell, Austin, past president of the Woman's Auxiliary to the Texas Medical Association; Mrs. T. C. Terrell, Fort Worth, chairman of the Committee on Public Relations of the Auxiliary; J. M. Coleman, Austin, Seventh District councilor; and N. C. Forrester, Austin, executive secretary of the Association.

DISTRICT SOCIETIES

Fifth and Sixth Districts Society

July 11-12, 1952

(Reported by R. J. Sigler, Secretary)

The Third Phase of Medicine—T. C. Terrell, Fort Worth.
Thrombo-embolism—Alton Oschner, New Orleans.
The Practical Aspects of RH Factor—Edith Potter, Chicago.
Recent Advances in Anemias—Carl Moore, St. Louis.
Nerve Blocks for Pain—F. A. Duncan Alexander, McKinney.
The Evaluation of Scoliosis for the General Practitioner—John H. Moe, Minneapolis.
The Importance of Pulmonary Factors in Pediatric Mortality—Edith Potter.
Safety in Anesthesia—F. A. Duncan Alexander.
Carcinoma of Lung—Alton Oschner.
Peripheral Vascular Disease—Alton Oschner.
Recent Advances in the Hemorrhagic Diseases—Carl Moore.
Fractures of the Elbow, Forearm, and Wrist—John H. Moe.

The above scientific program was presented at the meeting of the Fifth and Sixth Districts Medical Society in Corpus Christi, July 11 and 12.

At the business meeting Y. C. Smith, Sr., Corpus Christi, was named president; W. W. Bondurant, Jr., San Antonio, vice-president; and R. J. Sigler, Corpus Christi, secretary-treasurer.

Approximately two hundred physicians attended. The next meeting will be held July 10-11, 1953, in Corpus Christi.

AUXILIARY SECTION

EXECUTIVE BOARD MEETING

The first in a series of meetings and activities to be held prior to and during the week-end dedicatory ceremonies for the Texas Medical Association Memorial Library and headquarters building will be the fall meeting of the Executive Board of the Woman's Auxiliary to the Texas Medical Association.

Scheduled for 10 a. m. Thursday, September 18, the Auxiliary meeting will be held at the Austin Country Club. Members of the Travis County Auxiliary, serving as hostesses, will provide transportation from the Commodore Perry Hotel to the club.

Mrs. Robert F. Thompson, El Paso, President of the State Auxiliary, has named Mrs. Allen H. Neighbors, Jr., president of the Travis County Auxiliary, as chairman of arrangements.

AUXILIARY NEWS

Galveston County Auxiliary

Installation of officers of Galveston County Auxiliary took place at a garden party at the home Dr. and Mrs. Clarence S. Sykes, Galveston, May 20. They are as follows: Mrs. Arild E. Hansen, president; Mrs. M. A. Caravageli, president-elect; Mrs. William C. Levin, vice-president; Mrs. Andrew Magliolo, Dickinson, recording secretary; Mrs. Peter Kamin, corresponding secretary; and Mrs. Dan R. Smith, treasurer.

Mrs. S. R. Snodgrass reported on the Auxiliary meeting in Dallas, which she attended as delegate. The social hour was arranged by Mrs. George T. Lee, chairman, and Mrs. J. W. Middleton, co-chairman, assisted by Mesdames Fred Aves, Dickinson, G. W. N. Eggers, W. J. Jinkins, Edward Randall, Jr., William F. Spiller, and C. T. Stone.

Harris County Auxiliary

Wives of physicians attending the Postgraduate Medical Assembly of South Texas in Houston, July 21-23, enjoyed a variety of entertainment planned by the Harris County Auxiliary under the leadership of Mrs. J. Peyton Barnes, president. A luncheon honoring wives of guest speakers was held July 21, with Mrs. Lynn Zarr as chairman. A style show tea was held the afternoon of July 22, with Mrs. Jack G. Brannon as chairman and Mrs. Don Gready in charge of reservations. Members of the assembly were hosts at a dance that evening.

Henderson County Auxiliary

Mrs. A. H. Easterling and Mrs. B. H. Pruitt were hostesses for the May 15 meeting in Athens of Henderson County Auxiliary at Mrs. Pruitt's home. Eleven members were present. Dr. D. Price, president of the medical society, spoke on "Civil Defense." He suggested that the auxiliary sponsor first-aid and home nursing courses as a vital contribution.

Mrs. R. R. Buie presided. Reports on the campaign for blood donors were given, and plans for the blood bank June 3 and 4 were made. The auxiliary is furnishing drinks, nurses, and typists for the blood bank.

Each member responded to roll call with items concerning civil defense or something new in medicine. Mrs. R. E. Henderson, parliamentarian, gave a parliamentary drill.

Mrs. John W. Gibson and Mrs. R. E. Henderson served as hostesses at the meeting July 17 at Mrs. Gibson's home in Athens. Mrs. R. R. Buie presided, and the program was opened with roll call response of "What Is New in Medicine." Mrs. Gibson then led a round-table discussion of national, state, and local preelection interest with special reference to socialized medicine. During the business session it was announced that Mrs. N. D. Geddie, Jr. would deliver used magazines to the Henderson Memorial Hospital once each month.

Lamar County Auxiliary

The Lamar County Auxiliary entertained Paris doctors June 5 with a covered dish supper, a traditional summer event. Fifty-nine members, physicians, and guests were served at the buffet-style party.

Mrs. O. W. Robinson, Paris, President of the Woman's Auxiliary to the Texas Medical Association, installed new officers of the Lamar County Auxiliary on May 8 in Paris.

The installation was held in the home of Mrs. N. L. Barker, president for 1952-1953. Others taking office were Mrs. George Woodfin, president-elect; Mrs. Courtney Townsend, first vice-president; Mrs. Scott Hammond, second vice-president; Mrs. John R. Kelsey, third vice-president; Mrs. James C. Strong, secretary-treasurer; Mrs. M. A. Walker, Jr., publicity chairman; Mrs. W. W. Fitzpatrick, parliamentarian; and Mrs. T. E. Hunt, Sr., historian.

Mrs. C. E. Gilmore, retiring president, reported on the annual state meeting in Dallas.—Mrs. W. L. Kelley.

Navarro County Auxiliary

The Woman's Auxiliary to the Navarro County Medical Society met July 8 at the home of Mrs. Dan B. Hamill in Corsicana. Members present voted to hold the annual auxiliary picnic on August 1. The group also voted to send a year's subscription of *Today's Health* to county and city school nurses. Mrs. Paul H. Mitchell reported on the meeting of the Twelfth District Auxiliary held June 8 in Marlin.

Members of the Navarro County Auxiliary entertained the Navarro County Medical Society with a lakeside picnic August 1 at the Country Club. The hostess committee included Mesdames J. W. David, T. O. Wills, J. H. Barnaby, Raymond Morphew, J. R. Riley, and H. B. Woods.—Mrs. Charles Duncan Stewart.

Fifth and Sixth Districts Auxiliary

Mrs. Robert F. Thompson, El Paso, President of the Woman's Auxiliary to the Texas Medical Association, was guest speaker at the annual meeting in Corpus Christi, July 11 of the Woman's Auxiliary to the Fifth and Sixth Districts Medical Society.

A combined business and entertainment program was held at the luncheon session July 11 at the Officers Club of the Naval Air Station.

Mrs. Thompson urged local auxiliaries to place nurse recruitment work at the top of their program of activities.

Officers of the Woman's Auxiliary to the Texas Medical Association: President, Mrs. Robert F. Thompson, El Paso; President-Elect, Mrs. E. W. Coyle, San Antonio; First Vice-President (Organization), Mrs. R. T. Travis, Jacksonville; Second Vice-President (Physical Examinations), Mrs. Troy A. Shafer, Harlingen; Third Vice-Presidents (Today's Health), Mrs. P. R. Jeter, Childress; Fourth Vice-President (Program), Mrs. John D. Gleckler, Denison; Recording Secretary, Mrs. Carlos R. Hamilton, Houston; Treasurer, Mrs. Oscar Marchman, Jr., Dallas; Corresponding Secretary, Mrs. Newton F. Walker, El Paso; Publicity Secretary, Mrs. A. H. Neighbors, Sr., Austin; Parliamentarian, Mrs. Joe D. Nichols, Atlanta.

Mrs. Troy Shafer of Harlingen, Sixth District council woman, presided at the business meeting. Mrs. Joseph G. Pasternack, Corpus Christi, acted as secretary in the absence of the district secretary.

Mrs. T. C. Terrell of Fort Worth, wife of the Texas Medical Association President and chairman of the Public Relations Committee of the Woman's Auxiliary and Mrs. E. W. Coyle of San Antonio, State President-Elect, were introduced.

A style show was the feature of the luncheon entertainment.

Twelfth District Auxiliary

The Woman's Auxiliary to the Twelfth District Medical Society met in Marlin, July 8 in the Administration Building of the new Veterans Administration Hospital, with the president, Mrs. H. Henry Harrison of Bryan presiding. Mrs. G. V. Brindley, Sr., of Temple, delivered the invocation; Mrs. R. E. Miller of Marlin gave the welcoming address; and Mrs. Van Doren Goodall of Clifton responded. A memorial offering was given in memory of the late Mrs. W. A. Wood of Waco.

Mrs. R. T. Travis, First Vice-President of the Woman's Auxiliary to the Texas Medical Association, spoke to the group concerning the organization of new auxiliaries in Texas.

A tea was held in the afternoon at the home of Mrs. Howard Smith.

There were approximately forty members present.—Mrs. F. F. Kirby, Publicity Secretary.

DEATHS

W. R. MOORE

Dr. William Raymond Moore, Vernon, Texas, died May 20, 1952, of cirrhosis of the liver following a prolonged illness.

Dr. Moore was born on May 16, 1888, in Alexander, the son of Dr. and Mrs. Van Rumpth. Dr. Moore assumed the surname of his mother, who married a second time. He attended Dublin High School, Dublin, and John Tarleton College, Stephenville, before going to the Vanderbilt University School of Medicine, Nashville, where he received his doctor of medicine degree in 1914. Dr. Moore did his intern work and was house surgeon at St. Thomas Hospital, Nashville. He later returned to Texas and practiced in Spur from 1918 to 1920. After this Dr. Moore located in Vernon and remained there until his death. He was associated with his brother, the late Dr. M. J. Moore, in the operation of the Moore Brothers Hospital in Vernon. Dr. Moore specialized in surgery.

A member of the American Medical Association and the Texas Medical Association through Wilbarger County Medical Society for many years, Dr. Moore served as president of his county society in 1938. During World War I he saw service in France as a first lieutenant in the Army Medical Corps. Dr. Moore was a member of the American Legion, Masonic Lodge, Shrine, Lions Club, Chamber of Commerce, and the Central Christian Church in Vernon. He also was concerned with his large farming interests.

Dr. Moore and Miss Clemie Putman were married on January 5, 1917, in Spur. He is survived by his widow; two daughters, Mrs. J. M. Johnson, Westover Air Force Base, Mass.; and Mrs. R. C. Rogers, Alexandria, Va.; one son, W. R. Moore, Jr., a student at the University of Texas; and four grandchildren.

W. M. WIER

Dr. Warren Mulrow Wier, Houston, Texas, died August 4, 1952, at his home of a stroke.

The son of Clarence Henry and Mary (Wood) Wier, Dr. Wier was born October 31, 1880, at Hempstead. He attended Austin College in Sherman, the University of Texas Medical Branch, Galveston, and in 1904 received his doctor of medicine degree from Tulane University School of Medicine; New Orleans. He served his internship at St. Joseph's Infirmary, Houston, and remained in Houston, where he practiced for some forty years. Dr. Wier operated one of the first x-ray machines ever used in Houston.

Dr. Wier was a member of the American Medical Association and the Texas Medical Association through Harris County Medical Society. He was one of the youngest doctors ever elected to the presidency of the Harris County Medical Society, serving when he was only 29 years of age. Dr. Wier served as a captain in the Army Medical Corps during World War I and was stationed in France. He held a commission as colonel in the reserves. Dr. Wier was a member of Phi Chi medical fraternity, the American Legion, and the Presbyterian Church.

DR. W. M. WIER

Dr. Wier and the former Miss Marie Louise Barbier were married April 10, 1919, at Nancy, France. Surviving him are his wife; one daughter, Mrs. E. M. Whitlow, Dallas; one sister, Mrs. T. W. Adair, Houston; and one brother, C. O. Wier, Houston.

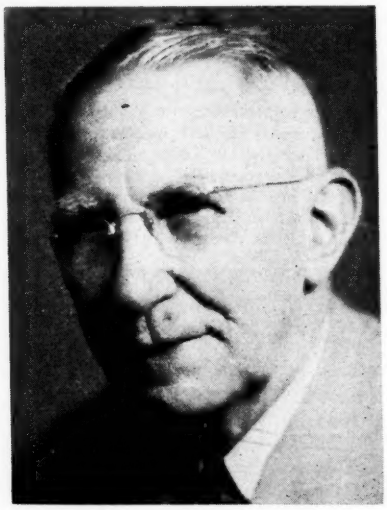
An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

T. A. TAYLOR

Dr. Thaddeus A. Taylor, Lufkin, Texas, nationally known for his work in the field of oxygen therapy, died at his home July 17, 1952, of arteriosclerosis following a lengthy illness.

Born July 21, 1875, in Prosperity, S. C., he was the son of Monroe and Kelline Taylor. He attended public schools and St. Luke's Academy in South Carolina before receiving his medical education at Memphis Hospital Medical College (later merged with the University of Tennessee College of Medicine). He received his medical degree in 1901.

Dr. Taylor began practicing medicine in Lufkin in 1908. He specialized in anesthetics and internal medicine. Especially interested in research work in oxygen therapy and equipment, Dr. Taylor invented an oxygen tent known as the Oxygenaire, which was adopted as standard equipment in naval hospitals during World War II. In addition, he also invented the Taylor oxygen tent and a baby incubator. Dr. Taylor was the author of several articles on oxygen therapy. In 1951 the University of Tennessee honored him with a certificate of appreciation commemorating his completion of fifty years of practice.



DR. THADDEUS A. TAYLOR

Dr. Taylor for many years was a member of the American Medical Association and the Texas Medical Association through Angelina County Medical Society, of which he had twice been president. He was a member of the House of Delegates of the Texas Medical Association from 1930 to 1943 and from 1949 to 1951. In 1951 he was elected to honorary membership in the State Association.

Dr. Taylor had served as president of the Lufkin Independent School District, the Lufkin Chamber of Commerce, and the board of managers of the Angelina County Hospital, as member of the city council, and as vice-president of the Guaranty State Bank, Angelina Hotel, and Taylor Hardware Company. During World War I he was director of the Red Cross. He and his son, Dr. Robert Taylor, owned and operated the Taylor Clinic in Lufkin. At the time of his death, Dr. Taylor was on the Selective Service Board of Appeals. He was a member of and elder in the Presbyterian Church for many years.

Dr. Taylor is survived by his wife, the former Miss Vernon Jordan Ware, whom he married in Dallas in 1946; three sons by a former marriage, Herman Taylor and Drs. Robert and Wayne Taylor, Lufkin; and one sister, Mrs. Gary Hawkins, Newberry, S. C.

J. C. DOBBS

Dr. James Cole Dobbs, Cuero, Texas, died August 8, 1952, in a Cuero hospital.

Born in Kosciusko, Miss., on April 7, 1877, Dr. Dobbs was the son of the Rev. David H. and Hannah (Cole) Dobbs. Following his graduation from high school, Dr. Dobbs entered Baylor University, Waco, where he received a bachelor of science degree in 1897. He then attended the University of Texas Medical Branch, Galveston, and old Memphis Hospital Medical College, Memphis, and was awarded a doctor of medicine degree from the latter in 1901. Dr. Dobbs practiced medicine in Crowley, La., and Ganado, Texas, and served two years in the Army Medical Corps during World War I before moving to Cuero in 1919. At the time of his death, Dr. Dobbs was acting in the capacity of city health officer.

DR. J. C. DOBBS

Dr. Dobbs for many years was a member of the American Medical Association and the Texas Medical Association through DeWitt County Medical Society and had previously served as president of the latter group. He was a past president of the Cuero Rotary Club, the Cuero Chamber of Commerce, and the Cuero Independent School District. Dr. Dobbs was an active member in the Presbyterian Church.

In 1907 Dr. Dobbs married Miss Eba Horton at Edna. Survivors include his wife; one daughter, Mrs. E. C. Zeorian, Denver, Colo.; and one granddaughter.

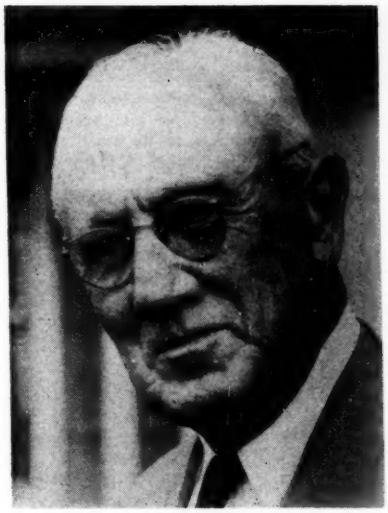
C. W. ARCHER

Dr. Cullen Whitworth Archer, Floresville, Texas, died June 23, 1952, at his home of angina pectoris.

Dr. Archer, son of the Rev. Joseph F. and Mattie (Cullen) Archer, a pioneer family of Texas, was born April 9, 1885, at Bellville. Dr. Archer took his premedical training at Southwestern University, Georgetown. He completed his medical education at the St. Louis College of Physicians and Surgeons and obtained his doctor of medicine degree in

1913. Dr. Archer practiced medicine at Lewisville, Texas, for approximately twenty years. Later he moved to Brownsville and lived there a short while before establishing his practice in Floresville, where he had practiced for more than twenty-five years. Until ill health forced him to retire some eighteen months preceding his death, Dr. Archer had been associated with Dr. S. R. Boykin of Floresville.

Dr. Archer for many years had been a member of the American Medical Association and the Texas Medical Association through Denton, Cameron, and more recently Karnes-Wilson Counties Medical Societies. He was a past master in the Masonic Lodge, past president of the Floresville Chamber of Commerce, and an active member of the Floresville



DR. C. W. ARCHER

Lions Club. Dr. Archer also served on the board of stewards of the Methodist Church for many years. He was a great lover of the outdoors and enjoyed hunting and fishing as hobbies.

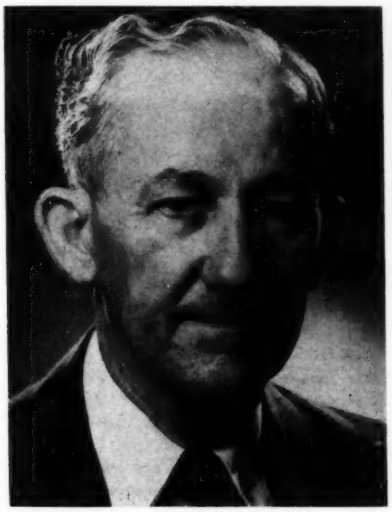
Dr. Archer was married to the former Miss Myrtle Carrell at Cedar Hill in 1906. She died in 1925. He married Miss Grace Ratliff at Denton on August 21, 1926. Survivors include his wife; three daughters, Mrs. Doyle Morton, Eldorado; Mrs. Martha Allen, San Marcos; and Miss Rebecca Archer, Kerrville; one son, Cullen Archer, Jr., Thorndale; one sister, Mrs. Orr Stinnett, Sacramento, Calif.; and three grandchildren.

N. D. CARTER

Dr. Noah Dilford Carter, Corpus Christi, Texas, died at his home on July 21, 1952 of cerebral neoplasm.

The son of Dr. George W. and Winnie Elizabeth (Campbell) Carter, he was born on December 5, 1883 at Durham, Ark. Dr. Carter attended the University of Arkansas, Fayetteville, and the Louisville Medical College, Kentucky, before completing his medical education at the old University Medical College of Kansas City. He received his medical degree in 1911. Dr. Carter practiced five years in Fayetteville and thirteen years in Robstown before moving in 1930 to Corpus Christi, where he practiced for twenty-two years. An Army veteran of World War I, Dr. Carter held the rank of captain and was stationed in France for fifteen months. He had served as chief of staff at Spohn, Memorial, and Ghormley Clinic Hospitals in Corpus Christi.

Dr. Carter held membership in the American Medical Association, the Texas Medical Association through Nueces County Medical Society, and the Southern Medical Association. Dr. Carter had been both president and secretary of his county medical society. He was a member of the Methodist Church.



DR. NOAH D. CARTER

Dr. Carter married Miss Zella Grove who died in 1927. In 1929 he and the former Miss Lucy Pennington were married at Robstown. Surviving Dr. Carter are his wife; three sons, Corporal Dilford C. Carter, Fort Sam Houston; Rand Carter, Corpus Christi; and a son by his first marriage, James Carter, Premont; one daughter, June Carter, Corpus Christi; four brothers, L. A. Carter, Fort Worth; Von Carter, Muskogee, Okla.; Judge Witt Carter, Fayetteville; and R. J. Carter, Artesia, N. Mex.; and two sisters, Mrs. E. M. Overshiner and Mrs. M. E. Warner, both of Corpus Christi.

R. C. WEST

Dr. Robert Charnock West, Dumas, Texas, died June 27, 1952, in a Waco hospital from adenocarcinoma of the ileum.

Dr. West, son of Stephen Waters and Mary (Charnock) West, was born February 18, 1908, at Malone, N. Y. He attended Wichita Falls High School, Wichita Falls Junior College, and Southern Methodist University, Dallas. In 1935 he received his medical degree from Baylor University College of Medicine, then in Dallas. Internship and residency were served at Baylor University Hospital, Dallas, and Wichita Falls General Hospital respectively. Dr. West then practiced in Hamilton from 1937 to 1940 and from 1945 to 1948. He moved to Dumas in 1948, where he practiced until he took ill several months before his death. He and Drs. Duane W. Meredith and Norman E. Wright organized a medical clinic in Dumas in 1948. Dr. West specialized in general surgery. He was a reserve officer in the Army medical corps and was one of the first doctors to be called to active duty during World War II. Dr. West held the rank of colonel and was stationed overseas, serving as head of an Army hospital in France and also as head of two Army hospitals in Germany.

Dr. West was a member of the American Medical Association and the Texas Medical Association through the

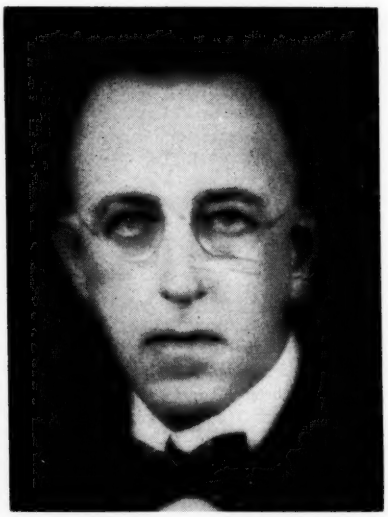
Hamilton and the Dallas-Hartley-Sherman-Moore Counties Medical Societies. He had been president of both of the county societies of which he was a member. Dr. West was a charter member of the Texas Arthritis Association and also a member of Phi Chi medical fraternity, the Lions Club, and the Methodist Church. He was active in the American Physicians Art Association and made a hobby of painting.

On July 31, 1934, Dr. West and Miss Catherine Kay were married in Wichita Falls. She survives as do his mother, Mrs. Mary Charnock West, Hollywood, Calif.; one sister, Mrs. J. C. Thomas, Houston; and three brothers, Stephen C. West, Sherman Oaks, Calif.; John C. West, Phoenix, Ariz.; and William C. West, Hollywood, Calif.

P. M. ARCHER

Dr. Palmer Marion Archer, Houston, Texas, died July 3, 1952.

Dr. Archer was born December 5, 1884, in Beaumont, to James Edwin and Alice (Lege) Archer. Receiving his preliminary education at a Houston academy, he was graduated in 1906 from the University of Texas. In 1910 he completed his medical course at the University of Pennsylvania, Philadelphia. Internship and residency were served at the Mercy Hospital, Pittsburgh, and Howard Hospital, Philadelphia. He took a postgraduate course in otolaryngology at the University of Pennsylvania. Except for six months in Philadelphia and three years in Mission, Dr. Archer had spent his professional life in Houston. He was emeritus professor of clinical otolaryngology at Baylor University



DR. PALMER ARCHER

College of Medicine. He also served on the courtesy staff at St. Joseph's Infirmary, Memorial Hospital, and Methodist Hospital.

A member of the Harris County Medical Society and the American and Texas Medical Associations, Dr. Archer was also affiliated with the American College of Surgeons, Houston Eye, Ear, Nose, and Throat Society, Southern Medical Association, Texas Society of Ophthalmology and Otolaryngology, and Postgraduate Medical Assembly of South Texas, and was certified by the American Board of Otolaryngology. Dr. Archer was a member of Sigma Chi fraternity, Phi Alpha Sigma medical fraternity, Knights of Pythias, Temple Lodge, Ruthven Commandery, and the Shrine.

In 1910 Dr. Archer and Miss Harriette Becton were wed in Washington, D. C. She survives as do one daughter, Mrs. Sydney G. (Ellen) McGlasson, and one son, James E. Archer.

W. F. ALEXANDER

Dr. William Franklin Alexander, Terrell, Texas, died June 6, 1952 from carcinoma of the lung.

The son of C. L. and Alice Anna (Hall) Alexander, Dr. Alexander was born in Crockett, Texas, on November 22, 1878. His preliminary education was acquired at Jacksonville and Elmo, Texas, and Greenwood, La. Dr. Alexander attended Memphis Medical College, Memphis, Tenn., and in 1905 was graduated from the old Southwestern University Medical College, Dallas. After an internship in St. Paul's Hospital, Dallas, Dr. Alexander returned to Elmo, where he began his medical practice. After nine years there, he relocated in Terrell. A partner in the establishment of the Alexander-Holton Hospital in 1927, Dr. Alexander ac-

DR. W. F. ALEXANDER

quired full interest in the institution in 1940, and it became the Alexander Hospital. In recent years he devoted most of his time to farming and raising cattle, and his son, Dr. G. H. Alexander, took over the hospital.

Dr. Alexander was an honorary member of the Texas Medical Association and a past president of the Kaufman County Medical Society. He was also a member of the American Medical Association. During his service in Terrell, he was county health officer, school board president, and local surgeon for the Texas and Pacific Railway Company.

A member of the Masonic order and Odd Fellows, he was a steward at the First Methodist Church at the time of his death. At one time, Dr. Alexander was mayor of Terrell.

Dr. Alexander was married in 1906 to Miss Lottie Coon in Terrell; she died in 1916. He is survived by a second wife, the former Miss Mable Evans, whom he married May 24, 1928, in Dallas. Other survivors are one son, Dr. G. H. Alexander of Terrell; three brothers, Fred Alexander, Dallas; C. L. Alexander, Tyler, and Roy Alexander, Englewood, N. J.; and two sisters, Mrs. G. O. Crisp, Kaufman, and Mrs. J. H. Legg, Kemp.